I feel very privileged to have the honour and the opportunity of giving this year’s McDougall Memorial Lecture here at the Food and Agricultural Organization of the United Nations. I am particularly grateful to the Director-General, José Graziano da Silva, for inviting me.

The number of hungry people in the world is difficult to estimate with any precision. There are, in fact, different ways of making this estimation, and even diverse ways of defining hunger and undernutrition. What is, however, altogether clear is that no matter how we do our estimate of the incidence of hunger in the modern world, we shall end up with very large numbers, unless we choose to overlook the large basket of tell-tale information that are available on the subject, or pick some very idiosyncratic definition of hunger. It would be silly - and sad - to hold up our enquiry into the causation of hunger, waiting for an agreed exact estimate of the number of hungry people on earth. As Aristotle had noted, any subject has to look for the kind of "clarity as the subject-matter allows; for the same degree of precision is not to be expected in all discussions, any more than in all the products of handicraft."

We can get some idea of the magnitude of the problem if we begin with the estimate by the Hunger Project that there are 870 million people on earth who can definitely be called food deprived and hungry. Again, that specific number need not be taken to have any particular exactness, but it is hard not to be deeply concerned about what looks like a huge proportion of the population (quite a bit more than one person in ten on earth) living in conditions of hunger and undernourishment. It is also important to note that the same source estimates that 60 per cent of the hungry people on earth are women, and that one in six children born in developing countries are clinically underweight at birth in worrying ways.
There is plenty to discuss about different aspects of hunger and its far-reaching and diverse consequences, but perhaps the first question to ask is: why is there so much hunger around the globe? The world today is enormously richer, in terms of averages and total incomes and wealth, than it used to be. Indeed, vast numbers of people on earth enjoy living standards today that our ancestors would have found difficult even to imagine. Why has this global opulence not solved the problems of hunger and undernourishment? That question demands an answer. And the answer must depend on what view - what theory - we have of the causation of hunger.

About forty years ago I tried to use a concept that I called "food entitlement" to explain famines, and I believe I can claim with some plausibility that the notion proved to be of some use in explaining the antecedence and basis of observed famines. It seems natural to ask whether the idea of entitlements generally and food entitlement in particular, helps in explaining the persistence of regular, widespread hunger (as opposed to periodic famines) in our relatively prosperous world. On the basis of the earlier work it was clear that focusing on failures of people's entitlements helps to explain starvation in particular, but also hunger in general. This is an attempt to follow up that lead.

However, for the sake of full disclosure, especially in giving a lecture at the FAO, I should share with you the fact that when I was introduced in 1981 to the Director-General of the FAO shortly after the publication of my book on the subject - Poverty and Famines: An Essay on Entitlement and Deprivation - the Director General told me that my book was absolutely the worst book on food and famine that he had ever read. I did find that assessment somewhat deflating. But I should also make clear that what I said in my book was quite critical of estimating the incidence of hunger and the likelihood of a famine on the basis only of data on food availability per head, which was the standard method at that time in use at the FAO. I guess I would have perhaps also been deflated if the FAO's judgement had been that what I was saying was music to their ears. And, I told myself, “look here, it is quite distinguished to have authored absolutely the worst book ever on a subject in which so much has been written.” So I am particularly grateful to the present Director-General for giving me a second chance at the FAO.

Let me then begin by discussing briefly the idea of food entitlement and how it differs from food availability per head, and also how they interrelate, if they do. And also discuss how all this may help to explain the continued prevalence of large-scale hunger in the world, and no less importantly what remedial actions may follow from an appropriately reasoned diagnosis.

The basic idea of food entitlement is extremely simple and elementary. Since food and other commodities are not distributed freely to people, their consumption in general - and their ability to consume food in particular - must depend on the basket of goods and services they respectively have. In a market economy, the crucial variable is the amount of food a person can buy in the market, or directly own by having produced it in one's own plot of land (which is particularly relevant for an owner-cultivator of food crops). The presence of food in the world, or in the country, or even in the locality, need not, in itself, make the problem of having food to eat any easier for a starving victim. What we can buy would depend on our income, and that in turn would depend on what we have to sell (that is, the services we can offer, the goods we produce, or the labour power that we can offer to sell and succeed in doing so, through wage employment). How much of food and other necessary commodities we can buy will depend on our respective employment status, the rates of wages and other remunerations, and the prices of food and other commodities we buy with our incomes. Hunger and starvation, as I have tried to argue in my 1981 book, result from some people not having enough food to eat - it is not a characteristic of their not being enough food to eat in the country or in the region.

So a crucial variable here is the "entitlement set" of alternative commodity bundles which we can buy (or otherwise own). From that entitlement set, the family can choose any of the alternative baskets that are within its means. The amounts of food in each basket determine what the family is able to eat, and that in turn determines whether the members of the family are forced to starve or not.

On what do our entitlements depend? In a market economy, it must depend inter alia on what resources we have, what our endowments are: our respective labour power, and land and other assets we
own, which we can either use directly ourselves for production, or sell in the market. It must also depend on what opportunities the markets offer for our labour and for the goods and services that we can sell, and what the prices and availabilities are for the food and other commodities we hope to buy with the money we earn. Whether we have enough food to eat, or are forced to go hungry, depends thus on our endowments and on the conditions of production and exchange, which together determine our entitlements. If we are not able to buy enough food to satisfy our hunger, then we have to go hungry.

Hunger and starvation are caused primarily by entitlement failure. This is not the only possible cause, since hunger and starvation can also arise for other reasons, for example from our deliberate decision to fast for religious or political reasons. However, hunger and starvation typically arise from involuntary deprivation related to inadequacy of our entitlements.

That is a statement about the hunger of a family and the individuals in it. From there we can turn to broader categories, like a community, or to narrower ones, like persons in a family. To look at the community first. Entitlement failure can afflict a community, and indeed a large class of famines are typically initiated by severe loss of entitlements of one or more occupation groups, depriving them of the opportunity to command and consume food. They reflect group failures of entitlements. A similar remark can be made about widespread undernourishment, which may be far short of a famine, but may reflect nevertheless group inadequacies of entitlements. It follows that seen in this perspective, the study of hunger-related phenomena, which vary from severe famines to persistent non-extreme undernourishment, calls for analyses of entitlement failures, and of entitlement inadequacies of families in afflicted communities.

We can also move from families to individuals. Not every member of the family earns an income – infants don’t, very old people may not, and in many societies, women may do their work at home (sometimes very hard work too), but not be what used to be called “bread earners” – bringing in income from outside, in the market economy. The condition of individuals within the family would depend on rules governing the distribution of food within the family. Even though the market-based earners of the family may not be able to do their outside work and earn an income if they had to look after household work as well (including taking care of children and of the old and the sick), and even though household work is an essential ingredient of the process of earning an outside income, the social conventions in most countries of the world have tended to discriminate in favour of the so-called bread-earners and against those whose household work make that bread earning possible.

Entitlement analysis has to be, thus, extended to go beyond legal entitlements related to ownership, and to cover also such issues as the use of social norms and established conventions of sharing, which may determine who is accepted as having ”entitlement” to what. For example, the typical tendency in gender-biased societies to regard that women have less claim to attention within the family than men, or that girls are less entitled to good food - or good health care - than boys, shows the necessity of broadening the idea of entitlement from legal claims to socially accepted standards that could make some members of the family suffer more from deprivation than other members in the same family do. These social conventions and norms in sharing food and other commodities demand resistance and opposition, but in explaining hunger and starvation in the world as it exists today, we have to take note of the power of these established customs, which can be critically important for studying distributional problems between women and men, and to understand the likelihood of special deprivation of girls compared with boys.

How does food production relate to the concept of food entitlement? Food production does act as one of the important influences on food entitlement. Hunger and starvation may be substantially influenced by the lowness of food production. For example, a peasant family may have to starve because its output collapses through, say, a drought or a flood. In a different chain of causation, a family of wage earners may have to go hungry because food prices rise too much as a result of a crop failure. To consider another linkage, people employed in agricultural production may have to face hunger or starvation if they lose their jobs through a curtailment of production. Such an influence can originate in non-food
agricultural production as well. And yet, food and agricultural production cannot but be an important influence on food entitlements of people, and this influence can work through several distinct channels.

This is needed to be stated as clearly as possible, particularly because food entitlement has sometimes been seen - quite wrongly - as being a phenomenon that is altogether independent of food and agricultural production. This could not possibly be the case. Why is it, then, that food entitlement has appeared to be an "alternative" line of analysis of hunger and starvation - very different from analyzing these calamities in terms of problems of food production? What was the debate about in considering the alternative claims of food output decline and food entitlement failure as the basic foundational concept for analyzing famines and hunger?

The answer is not far to seek. While food entitlement cannot be independent of food production, they are not by any means congruent - or even very similar - concepts. Food production is one influence on food entitlements, but there are other influences as well. Nor is food production necessarily the most important influence on entitlements. Indeed, a famine can occur, or new hunger can emerge, without there being any food output decline whatsoever. Thus, it is not only the case that the impact of food production on hunger and starvation works through its influence on the respective entitlements of the people involved (not independently of them), but sometimes a person's or a group's food entitlement may fall sharply without any significant decline - indeed even without any decline at all - in food production. Even though food output is one of the determinants of food entitlement, we cannot get an adequate understanding of famines and starvation on the basis of investigating food output alone.

In my first book on famines, Poverty and Famines, I presented several examples of famines that had occurred without any substantial fall in food output (such as the Bengal famine of 1943 or Ethiopian famines of 1973), and even of examples of famines that took place in years of peak food availability (such as the Bangladesh famine of 1974). The possibility of the occurrence of famines or starvation or general undernourishment even in the absence of food production problems is particularly important to emphasize, since public policies and popular discussion are often geared entirely to food production problems, and this can distort policy as well as confuse prevalent debates. The penalty of that confusion and misdirection can be very high in human lives and sufferings.

It is quite crucial to avoid the mistake, on the one hand, of taking hunger to be caused entirely by food production problems, and on the other hand, of assuming that food production has no influence on hunger at all. In 1981, when I was trying to bring the analysis of entitlement more into focus and attention, I was acutely aware - and did indeed talk about - the connection of hunger with food production. But at that time there was a very extensive neglect of the linkage of hunger with factors other than food production which influence food entitlement and through that influence hunger.

The tendency to concentrate on food output alone was a serious problem for clear-headed policy making in combating hunger, starvation and famines. For example, there was a need to show how hunger and starvation can arise from unemployment, or from the collapse of markets for specific commodities on the sale of which our outside earnings may depend, or from a sharp rise in food prices caused by an increase in the demand for food. There was need also to point out that the Malthusian indicator of food availability per head can be extremely misleading - and thus very dangerous - particularly because a high value of per-capita food availability can generate a false sense of security, which can lead to inaction by the state and consequently non-prevention of preventable starvation and famines. Indeed, there are many historical examples of policy failures arising from such a mistaken understanding of the causation of famines.

It is fair to say that these issues have been discussed a good deal in recent decades. They are certainly much better understood now than they were in 1981. In fact, we may well have reached the point now where the balance of emphasis can fruitfully shift a little. Of course, to say that hunger is caused by poverty is right, and to relate starvation to the lack of purchasing power and to the inadequacy of income is also right. But it is also important to recognise the possibly important role of food production and food availability as one of the relevant factors that influence food entitlement. It is also sometimes very important to make sure that food supply does not fall so far behind market demand that food prices rise dramatically, and thereby making it hard for many poorer people to buy food. Indeed, that is the way in which hunger is initiated in many cases.
So for a balanced picture, we have to make sure that we put food production in its place, which is not an all important place, but nor is it a place with no importance at all. Without making the mistake of identifying food entitlement with food availability or with food production, and without taking food production to be the only serious influence on food entitlement, we also have to make sure that the influence of food production as one of the major determinants of food entitlement is widely understood. The prevalence of one mistake is not a reason for making the opposite mistake. We have to avoid both.

How does this discussion relate to the problems of food and hunger in the contemporary world? I would argue that it is quite relevant to a fuller understanding the problems of hunger in the modern world, and also for working out a suitably broad set of policy response to these adversities. Ultimately, the most important factor behind hunger is poverty. Significant influence is also exercised by conventions in use for the distribution of resources and opportunities - including food and health care - within the family. The main factors behind the continuation of world hunger include the huge continuation of poverty, despite the increasing prosperity of the modern world in terms of averages and totals. But poverty can be exacerbated by problems in the production side partly because food supply falling behind food demand tends to raise food prices, which can make many families much poorer, given their incomes. In addition, since many people earn their livelihood in producing food, or in being employed in activities that produce or process food, a failure on the production front can go hand in hand with strains on incomes and entitlements, including food entitlements.

Consider the problems of hunger in the world today in terms of the broad regions of the globe. While there is a lot of hunger still in Asia, the main problem for the region as a whole does not arise from - or primarily from - food production difficulties. Indeed food production per capita has continued to grow for Asia, and looking at the FAO statistics I see that even in 2011, per capita food output of Asia was as much as 15 per cent higher than it was five years ago. If there is a good deal of hunger in Asia - and in fact India alone has the largest absolute number of hungry people on earth - the reasons must be sought elsewhere, that is not primarily in the production of food.

While per capita food production has not been growing fast in Europe and the Americas, the income levels there, with some exceptions in Latin America, are sufficiently large to make it possible for most people to afford buying food to avoid at least strong forms of hunger.

On the other hand, Africa is neither particularly rich, nor experiencing steadily rising per capita food availability, as Asia is. Per capita food production was only 4 per cent higher in 2011 compared with the average of 2004-6, and it was actually 2 per cent lower in 2010. In analyzing the continuation of hunger in Africa, it would be difficult to resist the thought that stagnation of food production is a causally important factor. Hence it is right to attach importance to policy initiatives that raise food production in Africa rather more robustly than has been happening.

This would suggest that the recently initiated New Alliance for Food Security and Nutrition, led by Prime Minister David Cameron and others, has identified one of the causal concerns that need to be addressed. And this certainly is a cause for cheer. But if the cheer has to be confined to one - or at most two - cheers from a potential three, this is because there is a lot more that needs to be addressed in dealing with hunger even in Africa than local food production. There are, first of all, gigantic issues of distribution between families and within families, and expanding food production alone - through whatever means that could be marshalled for that single cause - may not take us very far in removing entrenched deprivation and destitution in Africa, which go hand in hand with hunger and undernutrition.

Second, different ways of raising food production are not exactly similar in terms of their effects on the potentially hungry population of a country. If the focus is entirely on how to raise food production, independently of the income and employment correlates of the process, then the resulting impact on hunger, caused by entitlement deficiency, would not be as well addressed as it could have been with an economic approach that looks at entitlements generated even as it pursues the general goal of expanding agricultural and food production.
Third, Africa must also consider the advantages of a more diversified and less vulnerable pattern of output. For the long-run economic stability and security of Africa, economic diversification is quite crucial. And this does require breaking the taboo of treating rapid industrialization for Africa as a simple “no, no.” With increased individual incomes, people can buy food, even when that income comes from industries and the food comes from elsewhere. There are big issues of organization and skill formation involved in an industrialization programme, but there is absolutely no reason to believe that unlike all other people across the world, Africans somehow cannot industrialize successfully. To hold that view as a canon of faith comes close to, I fear, an odd kind of racism.

Fourth, the task of economic and social change to end hunger in Africa include the need to pay attention to the importance of overcoming military and civil strife, expanding democratic governance, and also developing market institutions. The role of public policy must also cover the expansion of health care, family planning facilities, basic education (especially of women), and social security provisions. All these can contribute - directly and indirectly - to nutritional security, to good health care, and to a more successful overall economy, including a healthy agricultural sector.

There are, thus, critical questions that arise in assessing the reach and cogency of the approach taken by the New Alliance, and we definitely have to go beyond its relatively narrow approach to nutritional security in Africa.

What about South Asia – another region in which hunger is endemic, including in India, despite its high economic growth and rapidly rising per capita income of the nation? India was an instant success as soon as it achieved independence in eliminating famines that spanned the entire period of British imperial rule in India. Famines are easy to prevent by re-creating people’s lost entitlements, for example through emergency employment projects. And democratic India, with its multi-party politics, open public discussion, and uncensored newspapers, took the necessary steps for killing potential famines before they surfaced. The last substantial famine in India occurred in 1943 - four years before independence. Food supply in India also took large steps forward through the green revolution.

And yet the creditable record in famine prevention has not been matched by a similar success in eliminating the pervasive presence of endemic hunger that blights the lives of hundreds of millions of people in this country. Not only are there persistent recurrences of severe hunger in particular regions, but there is also a gigantic prevalence of endemic hunger across much of India. Indeed, India does much worse in this respect than even Sub-Saharan Africa. Calculations of general undernourishment - what is sometimes called "protein-energy malnutrition" - is much higher in India than in sub-Saharan Africa. Nearly half of all Indian children are, it appears, chronically undernourished, and more than half of all adult women suffer from anaemia.

What, then, should India do - indeed what can it do? It is particularly critical to pay attention to expanding regular employment opportunities (not just emergency employment), and to other ways through which the fruits of economic growth are shared widely among the population. India does have programmes of distributing subsidized food to a substantial section of the population, and that programme needs consolidation and expansion rather than curtailment, within the means that the government has for these purposes. India spends much more public money on subsidizing diesel for those who can afford to have diesel-using vehicles and other contraptions (a minority of the population), subsidizing cooking gas for those with modern equipment that use such gas, and providing subsidized and even free electricity to those who are connected than it does on food subsidy. It is worth noting in this context that one third of Indians have no power connections.

Also, undernourishment is not only a cause of ill health, it can also result from it. To prevent persistent undernutrition attention has to be paid to health care, in general, and in particular to the prevention of endemic diseases that deter the absorption of nutrients. The underdevelopment of public health facilities in India, thus, contributes directly to the continued toll of widespread undernourishment in India. There are also more complex causal connections. Recent medical research has brought out the long-run effects of maternal undernourishment, which not only ruins the health of the mothers, but can
also cause serious health problems for the children who are born with low birth weight, since they are more prone to children's diseases and - later on in life - also to adult diseases. Indeed, low birth weight substantially increases the incidence of cardiovascular diseases later in life.

There is also plenty of evidence to indicate that lack of basic education too contributes to undernourishment, partly because knowledge and communication are important, but also because the ability to secure jobs and incomes are influenced by the level of education. India’s deficiency in public health facilities and public education hurts it in many ways, and the issue of continued hunger is a part of that handicap. Given India’s democratic system, nothing is as important as clear-headed public discussions of the causes of deprivation and the possibility of successful public intervention. Even though India has a largely free media, and also a large and vibrant press (Indians read more newspapers every day than any other nation), the news and editorial coverage of issues of endemic hunger and its remedies has been oddly limited.

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To conclude, the prevalence of widespread hunger in the world calls for critical analyses of the diverse causes that can reduce people’s entitlement to food, and restrain their capability to remove and conquer hunger for all people – children, women and men. A much broader approach is needed than can be obtained from a narrow concentration on food production only. Even though the output of food is an important component of the collectivity of factors that influence people’s nutritional security and the avoidance of hunger, there are many other factors that are also involved.

These different influences, which operate together, demand that we do not isolate just one of those factors, and simply concentrate on that. “Do one thing at a time” is never a particularly good advice when it comes to economic and social policy, and it is particularly misleading in tackling the massive challenge of the huge prevalence of hunger in the modern world. We have to do many different things – together.


\footnote{Poverty and Famines: An Essay on Entitlement and Deprivation (Oxford: Oxford University Press, 1981).}