

## Out of Africa Box



*Semper Africa novi aliquid* wrote Desiderius Erasmus, quoting Pliny the Elder quoting Aristotle. There are always new things coming out of Africa. This issue of *Public Health Nutrition* is published in the month of the 18th International Congress of Nutrition (ICN) in Durban, meeting for the first time in Africa.

This is a good time and place to perceive the fundamental causes of well-being and good health, and of all types of disease whose immediate causes include inadequate and pathogenic food. In doing so, and in being prepared to act appropriately and effectively as well as to see and judge, nutrition scientists will be able to make a lasting difference for the better.

### Leading from the South

Ricardo Uauy from Chile succeeds Mark Wahlqvist from Australia as president of the International Union of Nutritional Sciences (IUNS) as from Durban until the 19th ICN in 2009. In his mission for IUNS<sup>1</sup> he states that 'leaders from China, India and other parts of Asia need to join Africans and Latin Americans, and those from the industrialised world, in raising awareness and demanding and leading actions to eliminate malnutrition in all its forms as a constraint on human and social development'.

I agree. He also states that the task for IUNS 'for this century and immediately, for the remaining years of this first decade, is to integrate biological, social and environmental dimensions into its work; to become a truly global union, meaning that more leadership will need to come from Africa, Asia and Latin America; and to train young nutrition scientists to become our future leaders'.

This implies 'an overall ethical framework, awareness of evolution and history, and application of broad principles including those of human rights and the sustained protection of human, living and physical resources'. It also implies that 'our profession becomes more aware of and sensitive to global social and environmental changes and their impact on the nutrition and health of humankind'<sup>1</sup>. In saying this he is advocating a new nutrition science, the subject of a companion issue of *Public Health Nutrition* to which he has contributed, also published at the time of the 18th ICN<sup>2</sup>.

So what are some of the fundamental causes of disease? Conscious Africans know, in their everyday professional and personal lives. Tola Atinmo from Nigeria, president of the Federation of African Nutrition Societies (FANUS), writes in a paper for presentation at the ICN in Durban<sup>3</sup> that food insecurity and its consequences are caused by 'weak political structures, skewed health resource distribution between rural and urban areas, and exclusion

of local people from planning and implementation of nutrition and health programmes'; and, to be more plain spoken, loss of human entitlements leading to destitution, made worse by external debt and privatisations required by external creditors<sup>4</sup>. Further, it has already been agreed by leading African nutrition scientists that malnutrition is a political and economic issue, and that effective action must also involve and empower women<sup>5</sup>.

### Planting our future in Africa

Yes, but how and by whom? Good news is that after Nelson Mandela, Africa again has a Nobel Peace Prize laureate who is a beacon for the continent and the world. In his paper, Tola Atinmo celebrates Wangari Maathai from Kenya, saying she is 'inspiring evidence of the potential Africans possess to protect their interests and improve the quality of their lives, always realising that protection of the environment and of national heritage is fundamental to development... For Africans this also implies a rediscovery of our culture to give us a sense of belonging, identity and self-confidence'<sup>3</sup>.

Stirring stuff; but what does this have to do with nutrition? Wangari Maathai, now her country's assistant minister for the environment and natural resources, created the Green Belt Movement in 1977. In her Nobel acceptance speech she says: 'As I was growing up, I witnessed forests being cleared and replaced by commercial plantations, which destroyed local biodiversity and the capacity of the forests to conserve water'<sup>6</sup>. The main environmental challenge in Kenya 'is deforestation and desertification. Few forests are left... when the forests are cleared, rivers and streams dry up, biodiversity is lost, and rainfall becomes erratic. This threatens farmers' livelihoods'<sup>7</sup>.

So she began to create what are now 600 community networks that have planted 300 million trees in Kenya. At the time of the Daniel arap Moi regime, she and the women of the movement were harassed, beaten and imprisoned, because they were resisting the commercial exploitation of the Kenyan forest commons. 'The tree became the symbol for the democratic struggle in Kenya'<sup>6</sup>.

She herself says what this has to do with nutrition, though I think that few readers outside Europe and North America will need any explanation. In the mid-1970s, working for the National Council of Women of Kenya, she was told by women in rural communities that 'they did not have enough wood for energy, or good sources of clean drinking water, or enough to eat – especially nutritious foods'<sup>7</sup>.

Her inspiration was to see that the way is to plant trees, which 'help heal the land, and help break the cycle of

poverty and hunger. Trees also provide a source of fuel, material for building and fencing, fruits, fodder, shade and aesthetic beauty... Trees and intact forests also keep soil healthy, stem erosion, protect rivers and streams... and promote regular rainfall, so droughts are avoided'.

The focus of the Movement is the sustenance of rural livelihoods. As this becomes achieved, communities gain independence and so become able to think and plan ahead. Household food security follows, consolidated in Kenya by cultivation of fruit trees and also of indigenous foods such as yam, cassava and arrowroot, as well as bee-keeping and food processing and marketing<sup>8</sup>.

### Treading lightly on the Earth

A systems approach shows that the rational and sustainable way forward for population nutrition is also the right way to preserve the world. In the new edition of *Limits to Growth*, the concept of the human 'ecological footprint' is explained. The 'World3' computer model developed over 30 years at Massachusetts Institute of Technology shows that in the 1980s the overall human use of living and physical resources (the 'footprint') began to exceed the Earth's capacity to supply and renew<sup>9</sup>.

This is not the view of just one group: in 1992 more than 1600 scientists from 70 countries, including 102 Nobel laureates, stated that 'human beings and the natural world are on a collision course'<sup>10</sup>. The most vital human priority now is to reverse what is otherwise an inevitably exponential 'ecological overshoot' that at some point perhaps later in this century will cause the social structures that we know and rely upon to collapse.

### Tending the seeds of democracy

Wangari Maathai's teaching and practice is an example of what the Brazilian philosopher and educator Paulo Freire calls *conscientização*, the process of social and political consciousness-raising whereby people become no longer objects, patients, consumers, but subjects, agents, citizens<sup>11</sup>. The context for this process is what the physician and anthropologist Paul Farmer (who writes from experience in Haiti, Peru and Russia, and also is a professor and at Harvard School of Public Health) identifies as 'structural violence': historical and current forces that enable the rich to get richer at the expense of the poor, who become increasingly impoverished<sup>12,13</sup>.

Organisations like The Green Belt Movement may be overlooked or misunderstood by nutrition scientists, because their way to secure adequate food and nutrition is not by any conventional intervention, and certainly not by focusing on food and nutrition in isolation. Communities are sustained not by handing out supplements or food, or money to buy food, but by enabling them to look after themselves.

That is to say, food security is gained not by attending to the immediate causes of inadequate food and nutrition,

but the deeper causes, of which one symbol and reality is loss of trees and all that trees mean and provide. By such means communities become nourished physically and also mentally. When people start thinking about why forests are cut down, they are on the path to restoration of the health of their environment and their society as well as of their communities, families and themselves. This involves a necessarily dangerous transformation of consciousness. In her own and some other countries, Wangari Maathai might have been murdered.

External experts and resources, from other countries or from national élites, can be useful. But a sign of the success of such projects is their increasing independence and autonomy, and the emergence of leaders from within the communities themselves, whose children may go to university and gain qualifications for the benefit of their people. The seeds and shoots of democracy, like those of trees, need tending.

### Seeing the reasons for malnutrition

One reason why Brazil is my country of choice is that I realised by the late 1990s that it is hard for anybody with experience confined to materially rich countries, to perceive the determinants of well-being, health and disease, not to mention any other significant realities. Hence Brazil for, to quote the old masthead of a popular British newspaper, 'all human life is here'.

Perhaps I should say hard for me, but I am not so sure. Recently a fellow guest at a reception in the grounds of an historic house in the Virginia countryside asked me what I was doing. I mentioned where I live and he brightened, explaining that friends of his were thinking of investing in soybean farming in the Brazilian interior, where land is less than a tenth of the price of what it is in the USA, and where there are lots of thousands of acres for sale. The only problem, he said, was security.

No, I did not lecture him on the destruction of *cerrado* ecosystems and global *McDonaldização*. Instead, in a spirit of helpfulness I started to explain that the land now for sale probably really belonged to dispossessed small farmers, some of whom were now extremely annoyed with good reason, and... Seeing his eyes glaze and a Latino waiter about to fill our glasses, I changed the subject, and did not say that from the other<sup>14</sup> point of view, the assassination of his friends (should they ever make bold to come in drive-hired Humvees over 'their' estate) would be understandable if not justifiable. We were, after all, standing on property whose first European settlers may well have been sold a bill of goods saying that the land was empty or, if not, all would be well once some wampum and whisky was handed to the natives.

It sometimes seems to me that a 'third world' peasant has a better grasp of the reasons for malnutrition than a 'developed country' health professional in the field, whose papers in learned journals may report quantiles of serum

rhubarb among say the coffee farmers of Kenya before and after being fed with isocaloric soy patties fortified with quantiles of rhubarb extract, thus showing that the instruments of measurement work. Such cohorts might include Tatu Museyni, a widow with two children at school, who interviewed by Oxfam<sup>15</sup> says of externally fixed 'markets': 'the price of coffee is destroying me. It is destroying this whole community. I cannot even afford to feed and clothe my children. . . Sometimes they are chased out of school because they cannot pay'.

I agree with Colin Tudge<sup>16</sup> that most influential people are sincere, and so that nutrition and food policy experts usually believe they are doing good. I also think that as an objective judgement, Paul Farmer's view of his fellow physicians<sup>17</sup> applies to conventional nutritionists: 'The actions of technocrats – and what physician is not a technocrat? – are most often tantamount to managing social inequality, to keeping the problem under control'.

### Destroying the forests of Brazil

Brazil is the country about which I now know something, and like Ricardo Uauy I support solidarity between Africa, Asia and Latin America, and also the countries of the Middle East and former USSR. So here is a reflection on coffee, which says nothing about its possible effects on heart disease or bladder cancer, but something about the state of nutrition of the Brazilian people, and also that of the people of all countries dependent on income from the export of primary products.

I thought of Wangari Matthai last time I took the main road from the city where I live in the uplands of Minas Gerais, to Rio de Janeiro. The second part of the journey is through precipitous mountains and a remnant of the *Mata Atlântica*, the forests of the Brazilian littoral that were as extensive as the Amazon rainforest when the Europeans first arrived. But much of the first part of the journey is a *via dolorosa*, through a wrecked landscape.

The forests of much of this part of Minas, a state roughly the size of France, were cut down in the 19th century for coffee plantations that now have been abandoned for over half a century. Until recently Brazil has been dependent on export of one product: first the wood that gave the country its name; then sugar; then gold. Then, most of all between the mid-19th and mid-20th centuries, Brazil's economy was dominated by coffee.

Primary products are cheap. Most of the profit from coffee is made by the foreign companies who buy and sell the beans, and who add value by roasting, processing, retailing and catering of branded products. Six companies control half the world trade in coffee, and two, Nestlé and Altria (formerly Philip Morris), have half the market for roasting and instant coffee<sup>15</sup>. Most of the rest of the income goes to the national traders. Producers receive about 1% of the price of a cup of coffee sold in a coffee bar<sup>15</sup>.

The explanation for the devastation of the Minas landscape is global markets. In Brazil coffee production has always been by the system of *latifundias*, big and often colossal estates. In the early 20th century coffee planters combined with government to protect themselves, the rural society they controlled and the national economy against fluctuations in commodity prices. With money borrowed from foreign bankers the federal government bought beans at a set price and sold them when the price offered by international traders was right. The system worked until the Great Crash of 1929; this demolished the economies of countries dependent on the export of primary products. The Brazilian government tried to stabilise the price of coffee by reducing its supply: between 1931 and 1944, a total of 78 200 000 sacks of coffee, the equivalent of the world's coffee consumption for 3 years, were burned<sup>18</sup>.

Plantation owners cut their losses and moved their families and their money into other enterprises. Rural economies collapsed: having no choice, most of the worker communities walked away; this was the time of the first mass migration of rural workers into the big cities that had no capacity to hold them, and the growth of what are now vast *favela* shantytowns.

What was left in the eviscerated countryside was, and is, mostly desolation. As in the USA, highway traffic is serviced by businesses offering gas, beer, snacks and girls. Parabolic aerials have mushroomed on the roofs of the roadside villages, to receive the Globo network *novelas*, soap opera fantasies of the good life of times gone by and now in the big cities.

### Preserving the commons

While writing this column I visited the remains of the *Fazendas São Laurenço e Boa Esperança* in the valley of the Paraíba river close to Rio de Janeiro state, whose owner still lives in the big house of what in the 1880s were the plantations of the richest *Barão* in Minas and perhaps in Brazil, with up to a million coffee bushes, at first worked by 260 slaves and their families, then by labourers without tenure. What now grows on the surrounding hills is mostly rough grass, scrub and termite hills. On the main square of the local small town of Belmiro Braga the cafés served mini-pizzas, burgers and cola and other fizzy drinks, although locally grown *mandioca* (cassava) chips, chicken fried with garlic (both delicious) and beer brewed in Minas were also available. The local shop sells Nescafé.

As I enjoyed *mandioca frita* and a cold beer I also thought of Tatu Museyni, East African countries dependent on export of coffee, and other African countries dependent on export of cocoa and cotton. All countries dependent on the export of primary products are thereby despoiled. Brazil is a vast country, immensely rich in living and physical resources. It has not directly suffered any

great external or internal war for a century. Some of its institutions are world-class, its federal governments are now democratic and relatively stable, and many of its states, including Minas, are well governed. The people of Belmiro Braga are not short of food, and their children get fair primary education. But the country continues to be drained, most of all now by its vast foreign debt, interest payments on which greatly exceed federal redistribution of money to some of the country's 10 million destitute people.

The difference between Brazil and many African countries is that Brazil is not quite or yet ruined by the repayments on its foreign debt: the economy is depressed but unlikely to collapse. Much depends on the course the country now takes. At the time of writing it seems that the next federal government is likely to privatise the remaining publicly owned industries, the federal universities and other national commons. It is also rumoured that the US government is interested in a scheme whereby the Amazon rainforest becomes an international territory.

Time, I think, for Brazil to grow its own Wangari Maathais. The bare hills of Minas Gerais are witness for those prepared to see and hear. Some people enjoy the landscape. My feelings are expressed by John Prebble writing about the sense of solitude in the Scottish highlands. 'If their history is known there is no satisfaction to be got from the experience'<sup>19</sup>.

### Facing this century's challenges

As I took photographs of the crumbling walls of the *Fazenda São Laurenceo* I had in mind a question asked by Jared Diamond: 'Will tourists someday stare mystified at the rusting hulks of New York's skyscrapers, much as we stare today at the jungle-overgrown ruins of Maya cities?'<sup>20</sup> He also sees the need for limiting human growth. He identifies reasons why societies collapse, usually rather soon after they reach the zenith of their trajectories. These include human population growth, impact of introduced on native species, overuse of water, over-hunting, over-fishing, degradation of soil, and the destruction of habitats – including forests.

The work of Wangari Maathai's Green Belt Movement reduces the human ecological footprint. Replicated everywhere, such action networks can recreate a world in which future generations will be glad to live. All of us in Durban for the 18th ICN should be able to see the connections between nutrition, society and the environment. As we face the challenges and opportunities of the 21st century, we also can see the future for nutrition as a biological, social and environmental science, in the great tradition of public health practice<sup>21</sup>.

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