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A U S T R A L I A

The national newspaper of sustainable agriculture

Sustainability and food security

By Scott Kinnear

Internationally acclaimed organic farming advocate, Patrick Holden, visited Australia in March this year to raise awareness on the subject of food security. Holden, director of the Bristol based charitable UK Soil Association (SA), spoke in Sydney at a public forum, a business breakfast and at a series of private meetings.

The Soil Association operates as a charitable trust in the UK to promote the development of organic food and farming. It also owns a certification arm - the Soil Association Certification. Around 70 per cent of organic food sold in the UK carries Soil Association certification.

The organisation has 200 staff and as director, Patrick has been instrumental in both the growth and direction of the organisation and has worked closely with Prince Charles for more than two decades.

The Soil Association has a strong interest in the philosophical and social development of agriculture globally. It draws upon the work of Sir Albert Howard in India who observed the connection between soil health and human health.

Patrick last visited Australia eight years ago when he spoke at an organic conference in Melbourne, Victoria. Much has happened since then.

I travelled with Patrick for two weeks in 2000 within Australia and then to New Zealand for one week.



Patrick Holden, Director, The Soil Association, UK on right, with facilitator, Scott Kinnear, at the public forum and business breakfast, to raise awareness on the subject of food security

Much of the excitement at that time was around the interest and development of organic food and farming. However in the last couple of years the urgency of debate has shifted towards concern about climate change, and our capacity to feed ourselves.

A key theme of discussion was that climate change and food security are interchangeable.

Australia is predicted to be a continent that will suffer the extremes of drought and flood under the influence of climate change.

It seems as if we are experiencing these extremes

Biotechnology and nanotechnology providers concur with Patrick Holden's view that a food crunch is imminent. But the solutions are worlds apart

now, rather than at some distant time in the future.

My property to the south of Daylesford, in central Victoria, has seen significantly reduced rainfall over the last 10 years and southwest WA has suffered significantly with reduced rainfall for nearly three decades.

Globally, we are experiencing drought on most continents including China and India as well as Australia.

In northern China 24 million acres of wheat have failed during the last growing season. Aquifers are being depleted faster than they have been replenished.

In the United States it will be only two or three decades before their production systems are seriously affected by lowered aquifers.

In Australia we have our own calamity unfolding with the Murray Darling River system.

The analogy that Patrick Holden uses is drawn from the global financial crisis. He believes that we

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David Bellamy on Noosa Biosphere

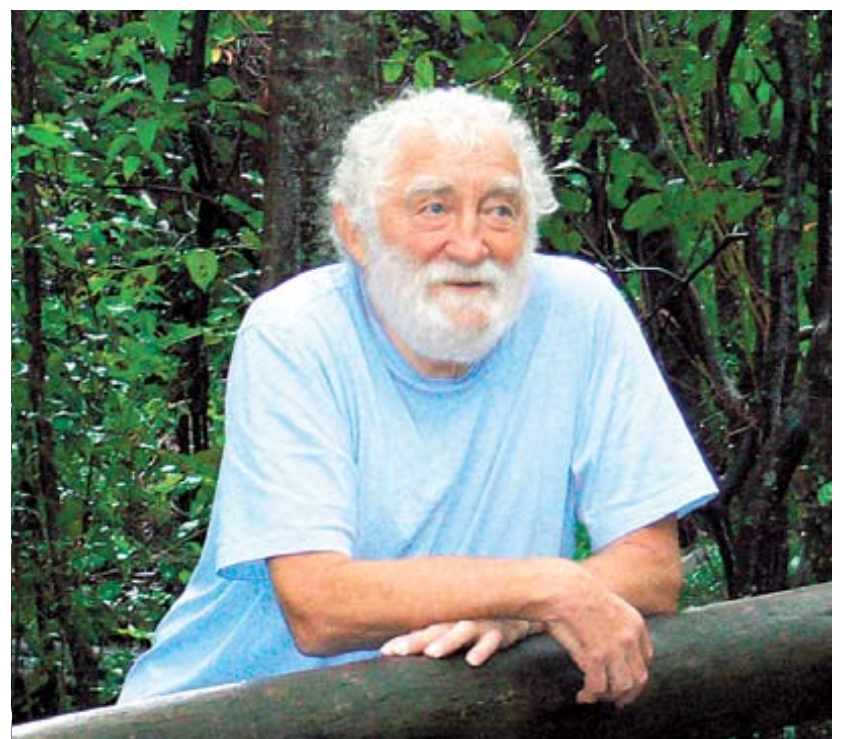
HERE he sat in the flesh, one of the world's greatest environmentalists, England's Professor David Bellamy OBE with his distinctive accent and truly tangible passion for the environment, at Noosa Heads, located 120 kilometres north of Brisbane on

Queensland's Sunshine Coast, on the east coast of Australia, sitting around a dining table in a Noosa riverfront apartment with hosts Lindsay and Sue Bock (publishers of Acres Australia), international environmental consultant Bill Foster, award-winning ecologist and environmental consultant Stephen Poole, former Noosa Shire deputy mayor Frank Pardon and publicist Deb Perry.

This was the David Bellamy as we remember him, a passionate conservationist speaking with authority and strength on biodiversity and ecology.

David Bellamy was in Noosa to see first-hand and support the biodiversity values of the region which

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Professor David Bellamy OBE, pictured at Noosa Heads, Queensland, tirelessly campaigns for man to live in harmony with nature.

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David Bellamy on Noosa Biosphere

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in September, 2007 was recognised by UNESCO (United Nations Educational, Scientific and Cultural Organisation) as Queensland's first Biosphere Reserve under the global protocol which defines a biosphere reserve as not only being a quality environmental site but also as "incorporating and engaging with the community".

In awarding Noosa's Biosphere Reserve status, UNESCO noted the region's strong sense of community involvement and co-ordination over a broad range of human settlement and natural environmental issues.

An early icon of global environmentalism, David Bellamy has been a highly prominent environmental campaigner, communicator and presenter since the 1960s and achieved popular global recognition through his hundreds of television programs and many books.

In Australia, David Bellamy is best remembered as being arrested (along with Australia's first Green MP, Dr Bob Brown) in the 1980s protesting the Franklin below Gordon Dam in Tasmania in front of a television audience of millions and spending his 50th birthday in Hobart's Risdon Prison.

He tirelessly campaigns for man to live in harmony with nature, hence his flying visit to Noosa to see first-hand "a truly special region".

"A Biosphere Reserve is a region where people live in harmony with natural history - where you have sugar gliders in your backyard - this is the answer to all the world's environmental problems," Prof Bellamy said.

"In this Noosa Biosphere there are whales, gliders, koalas, so much more - it is very special, a wonderful coastal world that hasn't really been heard about.

"A Biosphere must be studied so that diversity doesn't disappear, so that your grandkids can enjoy it.

"A biosphere reserve will bring in more and more tourists, so community leaders and businessmen should 'brand' it as something really special," he said.

The Noosa region is one of 531 global biosphere reserve sites recognised in 102 countries. These sites demonstrate innovative approaches to conservation and sustainable development and share their experience and ideas nationally, regionally and internationally within the World Network of Biosphere Reserves.



David Bellamy with award winning ecologist & environmental consultant Stephen Poole, left, former Noosa Shire Deputy Mayor, Frank Pardon and international environmental consultant, Bill Foster, right, in the Noosa Woods area at the western end of Hastings Street, Noosa Heads.

As Prof Bellamy said, these Biosphere Reserves go beyond confined protected areas and include zones where sustainable economic development is fostered via partnerships that include local people.

Biosphere Reserves are about developing quality economies based on local community action and entrepreneurship, sound science, public-private sector partnerships and networking.

Biosphere Reserves also provide learning sites to experiment with and showcase various approaches to sustainable development that are culturally relevant to local communities.

Prof David Bellamy and environmental consultant Bill Foster (based in New Zealand and the UK) had time to visit Noosa between speaking engagements in New Zealand and the United Kingdom.

Stephen Poole (who has known and worked with David Bellamy and Bill Foster for many years) organised and facilitated their three-day stopover visit and a variety of tours throughout the region.

Although the heavens poured . . . and poured, David Bellamy and Bill Foster were overwhelmingly impressed with what they saw.

They were also treated to recent footage taken by Stephen Poole of an

infrequent occurrence - a 45-minute fly past by millions of flying foxes which created a dense black haze kilometres wide and at least 60 kilometres long.

Such was the immensity of the flying fox flock, that observers could literally "feel the heat" generated by the creatures.

Prof Bellamy said this rare "mega concentration" of flying foxes was one of the world's top wildlife spectacles.

"This is crunch time for biodiversity," Prof Bellamy said.

"The difference between national parks and Biosphere Reserves is that man is restricted from national parks, from seeing and living with the animals. You have to touch natural history.

"What Noosa has here is of incredible significance - there is an important library of biodiversity and systems that are unique."

Prof Bellamy said the entire Noosa community should "own" the region's biosphere reserve listing.

"A green renaissance is coming for local communities," he said.

"Noosa could become a role model for Biosphere Reserves. Business should promote and brand the region. We've got to get the school children involved, have competitions where

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A 45-minute fly past by millions of flying foxes which created a dense black haze kilometers wide and at least 60 kilometres long. Such was the immensity of the flying fox flock, that observers could literally “feel the heat” generated by the creatures. Prof Bellamy said this rare “mega concentration” of flying foxes was one of the world’s top wildlife spectacles. *Photo: Stephen Poole*

From previous page they draw pictures of all the special birds and animals and display these in high-profile places such as airports.

“The schools could adopt animals and birds, the students educate and talk to tourists. There should be information cards and posters in all the eatery places and all the tourist sites. This has to be driven from a community level,” he said.

Prof Bellamy’s glowing opinions of the Noosa Biosphere Reserve could not have been more gratifying than to Noosa residents, Stephen Poole and Frank Pardon, who have worked tirelessly for years to achieve the UNESCO listing and were the two men instrumental in driving forward

the Noosa Biosphere Reserve listing.

Some 18 years ago, Stephen Poole began compiling environmental data on the Noosa region.

In the early days, he was based in Brisbane where he enjoyed award-winning success in working with Brisbane City Council in multi-million dollar projects to protect huge areas of bushland for koala corridors in the greater south-east region.

Four years ago, he moved to Noosa to concentrate on compiling a detailed report to win government backing for a UNESCO Biosphere Reserve listing for the Noosa region.

“There are hundreds of significance factors and many superlatives that you can use to describe this region,”

Mr Poole said. “There are at least 20 unique features in this region and nowhere else in the world can you find so many of these features virtually intact.”

His first and most ardent supporter was the then Noosa Shire deputy mayor, Frank Pardon. At their initial meeting, the pair laughingly remember that Mr Pardon’s first question was: “What is a Biosphere”.

After that, he was a hands-on supporter and successfully lobbied the then Noosa Shire Council to back the Biosphere Reserve listing push.

“It was an easy sell, I had 100 per cent council support. There were no negatives. It wasn’t going to cost council a lot, it was a fit with the

council’s planning and policies and it was the philosophy of the people that live here. Plus it had a lot of environmental, social and economic benefits to the region,” Mr Pardon said.

“We set up a Biosphere working group and moved fast to get a submission in to the State and Federal Governments for a letter of support to UNESCO.”

Mr Poole and Mr Pardon then joined forces to organise helicopter tours of the region for important national and international dignitaries including UNESCO’s Dr Ishwaran Natarajan.

Stephen Poole was also successful in securing millions of dollars for the former Noosa Shire Council to *Continued next page*

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buy environmentally-significant land. Frank Pardon particularly remembers one block of land which originally the Federal Government had earmarked about \$400,000 to \$500,000 to purchase.

"We then invited a Federal Government representative for a helicopter flight over the region," Mr Pardon said. "It was through that flight and Stephen Poole's knowledge and connectivity with the importance of the region that we actually secured 40 per cent of the Federal Government's remaining national environmental acquisition budget - an amazing \$1.64 million!

"The whole process to secure government backing for a Biosphere Reserve listing took just seven-and-a-half months - it was terrific! I've been told that this just may be the fastest international listing ever," Mr Pardon said.

UNESCO encourages Biosphere Reserves to twin with other biospheres with similar features around the world.

According to Mr Foster, the United Kingdom's North Devon Biosphere Reserve is one such option. Mr Foster, who has a close relationship with the development of that biosphere reserve, sees many similarities with the sand systems of this Noosa region.

"The North Devon area is on the North Atlantic coastline and as such is a popular surfing destination, a sea-change population with increasingly inflated property prices, and is in a World Heritage area.

The two Biosphere Reserves also have similar geological characteristics and sand dune systems although

In the last decade, Professor Bellamy has become a controversial figure in the popular press and scientific communities because of his forthright view that the man-made global warming threat is "a myth".

one is acidic and the other alkaline," Mr Foster said.

At the very heart of the reserve is Braunton Burrows, the UK's second largest dunes system and one of the best quality dunes systems in the northern hemisphere.

Mr Foster said twinning the two Biosphere Reserves would greatly strengthen the scientific, economic and social potential of each region - even though each Biosphere region was unique and would lead to a "promulgation of ideas for net benefit".

Noosa Biosphere Reserve is governed by a company called Noosa Biosphere Limited with links to the community through six sector boards covering culture, environment, tourism, social, economics and education research and development.

"The whole concept of a Biosphere Reserve is extremely positive and raises the profile of the regions on an international scale," Mr Poole said.

"On the ecological side, biosphere reserves are an umbrella to protect the environment and buffer it from the spread of giant urban conurbations. But just protecting something is not enough anymore. We need to ensure that wildlife corridors are in place to protect the wildlife and that areas of habitat are connected - oth-

erwise the values that underpin Biosphere economies will be lost.

"Every area needs champions to push the Biosphere concept," he said. "And it has to come from the grass roots of community and business groups."

As an environmental leader, UNESCO will be looking to innovative areas like the Noosa Biosphere Reserve to lead the way.

UNESCO's Man in Biosphere program is about living and working in an area without destroying biodiversity. It is a model for sustainability - one which Australia should look towards in an uncertain future where population growth and development need to be carefully managed.

David Bellamy's visit to Noosa was to highlight the importance of Biosphere Reserves and stress that the planet was at a greater environmental risk in losing its biodiversity than through global warming.

In the last decade, Professor Bellamy has become a controversial figure in the popular press and scientific communities because of his forthright view that the man-made global warming threat is "a myth".

In Noosa, David Bellamy was explaining his stand on global warming.

His stance, in layman's terms, is

that carbon dioxide is not the dreaded killer greenhouse gas that it is cracked up to be. Quite simply, the planet needs carbon dioxide to survive.

"Plants need it, together with sunshine and water, to create oxygen and complex carbon compounds (that we either eat, build with or just admire)," he said.

"Increase the amount of carbon dioxide in the atmosphere, double it even, and this would produce a rise in plant productivity.

"Call me a biased old plant lover, but that doesn't sound like much of a killer gas to me. Hooray for global warming, I say, and so do a lot of my fellow scientists."

David Bellamy and some 31,000 scientists around the world firmly believe that global warming is the result of natural phenomena plus bad environmental management such as building on flood plains and destroying hundreds of thousands of hectares of forest habitats worldwide.

"The truth is that the main greenhouse gas - the one which has the most direct effect on land temperature - is water vapour, 99 per cent of which is entirely natural," he said.

One of Prof Bellamy's main concerns is that while the focus is on global warming we are taking our eye off the ball in relation to the critical biodiversity issues and the loss of our forests to urban expansion.

That is why he considers Noosa's Biosphere Reserve as a shining example of man living in harmony with nature - an example which should be followed by global communities to ensure the long-term health of the planet. - Wendy O'Hanlon □

Noosa Biosphere Reserve - a snapshot

THE Noosa Biosphere Reserve includes a terrestrial area of 86,000 hectares of forests and wetlands in Noosa and Cooloola based on the old boundaries of the then Noosa Shire Council as well as coastal waters three kilometres offshore.

The total permanent population within the biosphere is approximately 50,000 people, with a seasonal population of up to 65,000.

The region has been described as a biodiversity museum - environmentally significant and diverse - with its diversity of fauna and flora rated above that of two of the world's most prominent World Heritage sites.

Noosa is home to 50 per cent of Queensland's bird species and over 44 per cent of Australia's bird species, compared to Australia's Kakadu National Park's 33 per cent in an area 24 times larger, while Noosa also boasts more bird and plant species than Yosemite National Park, USA, crammed into an area three times smaller.

The region straddles two ecoregions (Eastern Australian Rivers and Streams, as well as Eastern Australian Temperate Forests).

The Noosa River and lakes system are unique among Queensland estuaries with a transition from fresh water to hypersaline waters in the lakes.

Some 60 different regional ecosystems have been identified within the region - 34 of these regional ecosystems are classified as 'Endangered' or 'Of Concern' and cover 45 per cent or 18,288 hectares of the remnant native vegetation of the region.

At least 40 per cent of fauna species are considered to

be significant at varying scales (international to local) while at least 49 species of fauna are internationally significant and listed by the International Union for the Conservation of Nature in their REDLIST of Threatened species, and 73 fauna species are considered nationally significant and are listed in the Commonwealth EPBC Act.

Two sites in the Noosa River estuary are used as a roosting place by a mixed migratory tern flock of an estimated number of over 28,000 birds.

A total of 1,365 different species of higher plants have to date been identified - 39 species of native plants have conservation significance under the State Nature Conservation Act (Wildlife) Regulation (1994) and 21 species of native plants have been given national conservation protection and are listed under the Environment Protection and Biodiversity Conservation Act (1999).

The Noosa River Wetlands are described as a "spectacular and extensive system of freshwater, brackish and saline lakes, marshes, heathlands and estuarine wetlands associated with the Noosa River; it has unique landforms vegetation and fauna". The Noosa River lakes and adjacent wetlands are one of few such wetland complexes on the entire Eastern Australian seaboard and as part of the Great Sandy Region are considered to have World Heritage value and are in the process of being nominated by the State and Commonwealth Governments.

For more than 40 years, the region has been home to one of the earliest and consistently active networks of community conservation groups in Queensland. Numerous scientific studies of world standing have been undertaken in the area. Managing urban growth in a sustainable manner and developing a culture of responsible stewardship by all community members

is one of the key drivers of the Noosa Biosphere. The local economy has a strong reliance on tourism and this in turn is dependant on the natural resource base and locational attributes of the area.

There are productive agricultural lands, community services, light industry and managed forests reserves, located in the region.

Several international treaties for conservation apply including the Japan-Australia Migratory Birds Agreement, JAMBA, a migratory bird protection agreement with Japan, and a similar agreement made with China, the China-Australian Migratory Birds Agreement, CAMBA.

The majority of the core areas of the Noosa Biosphere Reserve are publicly owned lands and waters managed by either State or Local Government authorities for conservation under State legislation. There are two private freehold properties included in the core area. These properties have legislative conservation protection under State Legislation.

The buffer area includes both public reserves and private freehold lands that are managed to achieve integration of conservation and sustainable development outcomes.

Designation of a site as a biosphere reserve helps to raise awareness among local people, citizens and government authorities on environmental and development issues. It can help attract additional funding from different sources. Biosphere reserves can contribute to a global network of high profile pilot sites or "learning places" to explore and demonstrate approaches to conservation and sustainable development, providing lessons which can be applied elsewhere. □

Source: <www.noosatrust.com.au/protect_noosa.htm> and <www.unesco.org/mabdb/br/brdir/directory/biores.asp?mode=all&code=AUL+14>