



THE GREATER ANNAMITES ECOREGION



The Amazing Annamites are...

Home to some of the world's rarest animals...The discovery of the saola in the Annamites in 1992 amazed the world; it was the first large mammal to be discovered in fifty years. The Annamites provide the last sanctuary in the world for many endemic monkeys, birds and plants as well as large mammals such as the Javan rhino, Asian elephant, and Indo-Chinese tiger.

Distinctly distinctive... During the last ice age a 'refuge' of evergreen forest survived in the Annamites and many species evolved in isolation. As a result, the Annamites now have a high number of endemic species. The rest of Asia did not experience such conditions, making the Annamites a distinctive habitat.

Incredibly diverse... Just one of the nature reserves in the Greater Annamites contains more plant species than the whole of the United Kingdom!

An inspiration to many artists in Vietnam and Lao PDR including the famous Vietnamese poet Pham Tien Duat.

A central part of the region's cultural history... harbouring the legendary network of trails famously known as the Ho Chi Minh trail used by troops during the American/Vietnam war.

A hotspot of bio-cultural diversity... over seventy different ethnic groups, many with their own language, call the Annamites home. Some groups have lived in these forests for thousands of years. Xin Chao! Sabadee! ooa chau! xi pau!

Nature's medicine cabinet... many of the medicines used by the western world today are derived from forest products. People living in the Annamites often still rely on forest products directly to cure a whole range of ailments.



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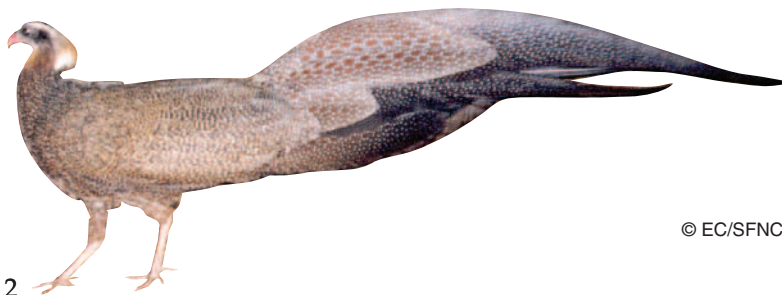
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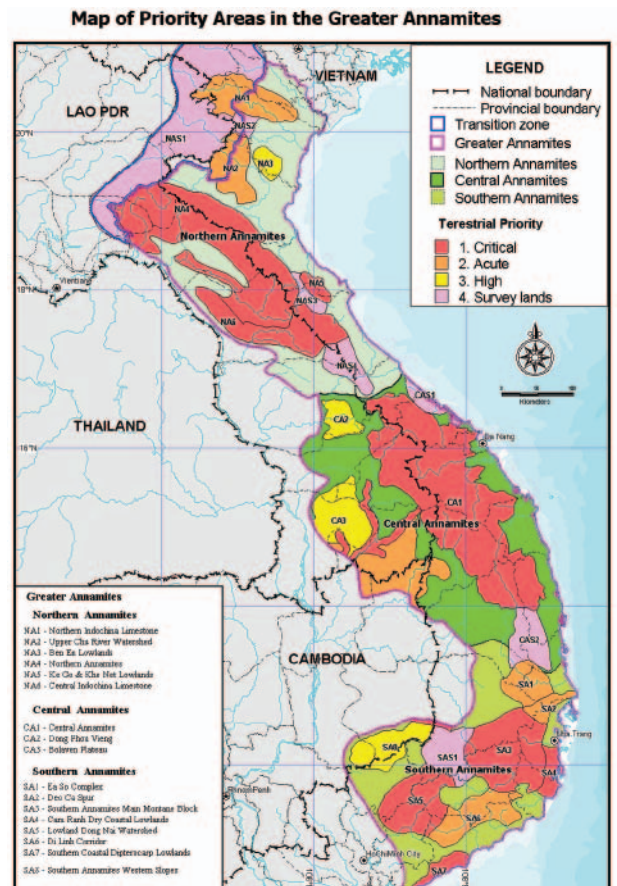
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Features of the Greater Annamites

Lying to the east of the Mekong River is a long chain of mountains called the Annamites, known in Lao PDR as the Saiphou Louang, and in Vietnam as the Truong Son. The Greater Annamites are dominated by this mountain range, which forms a spine stretching south from the highland areas of northern Lao PDR and Vietnam and follows the border with Lao PDR and Vietnam with its most south western outliers extending into the northeast of Cambodia. The longitudinal range is from 20°45' N to 10°20' N. Altitude ranges from 10-2,000m above sea level with several peaks up to 2,700m. In biological terms there are three main parts to the ecoregion: the northern, central and southern Annamites.

From the peaks and highlands to the slopes and lowlands, these rich tropical evergreen forests support a diverse range of precious plants and animals. This is a special region; the Greater Annamites house some of the least known and rarest species in the world. From the dense mist-shrouded forests in the north to the expansive high altitude plateaus in the south, the Greater Annamites offer a wide range of different habitats.

This extraordinary region, once in the midst of fierce warfare now lies at peace, and is starting to reveal some incredible secrets. These revelations have amazed the world and allowed a glimpse into a hitherto unimagined area of richness and diversity.





Fast facts about the Amazing Annamites...

37,000,000 people living in the Greater Annamites Ecoregion (35.9 in Vietnam, 0.9m in Lao PDR)

23,000,000 hectares... the area of the Greater Annamites

350,000 hectares... the size of Nakai-Nam Theun National Biodiversity Conservation Area in Lao PDR, the largest protected area in the Greater Annamites

300 US dollars... average annual income of people living in the Greater Annamites

54 Protected areas – 44 in Vietnam, 10 in Lao PDR.

70 Ethno linguistic groups call the area home

5 new species of large mammal discovered in the past decade

2 countries... in the Greater Annamites: Vietnam and Lao PDR

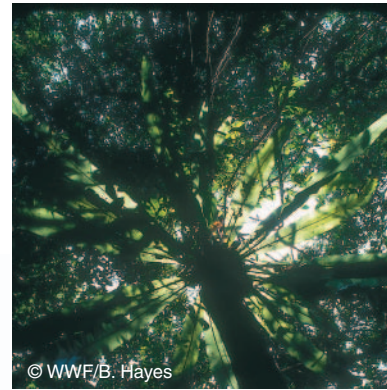
Lots...of species. The simple answer is that we don't know how many species of plants and animals live in the Annamites. New species are still being recorded.



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Amazing Annamites

Standing at the cross roads between two major biogeographical zones: the temperate north and the tropical south, the Greater Annamites incorporates elements of both in its flora and fauna. The ecoregion has a high diversity of habitats from the forest of the highly distinctive and characteristic limestone karst landscape, to the very dry coastal forests of the south, to the wet and windswept montane forests at the peaks of the Annamite Mountains. The variety of rare habitat types is coupled with extraordinary plant diversity. In Cuc Phuong National Park, in the northern Annamites, 1799 plant species have been identified so far – there is more plant diversity in just this pocket of the Greater Annamites than in the whole of the United Kingdom! Some plants in these areas are not found anywhere else in the world; they are endemic to this area.

The outstanding biological features of the Greater Annamites mean that this area is globally important for biodiversity. The diversity and uniqueness here is almost unrivalled. The distinctive biodiversity of the Greater Annamites is attributed to the continuation of warm, wet conditions during the last ice age. Across most of Southeast Asia, habitat fluctuated between moist evergreen rainforest and more open dry forest, but the unusual conditions in the Annamites allowed rainforest to persist, giving the forest and its animals thousands of additional years of refuge to evolve. These conditions persist today due to the short dry season, created by the mountain ridge holding the easterly monsoons over the mountains, while areas surrounding the Greater Annamites suffer major climactic changes.

Incredibly it is only over the last 15 years that the true uniqueness of the Greater Annamites' biodiversity has begun to be recognised. The main catalyst for this recognition has been the discovery of a number of large mammals, including the charismatic saola in 1992. A flood of new plants and animals has been described during a resurgence of biological surveys in the area. In Nakai-Nam Theun 1/25th of global bird diversity has been identified in just one pocket of the Greater Annamites; that's 4% of all known birds on earth. Even today surveys continue to produce new plants and animals at an astonishing rate, adding weight of the theory that the Greater Annamites have acted as a 'refugia' allowing specialised endemic creatures to evolve. These forests are home to a wide variety of animals and include some of the most endangered large mammals in the world: the Javan rhinoceros, Indochinese tiger and Asian elephant.

The secret forest...

A walk through the forested mountains reveals little of the diversity of the amazing Annamites. In some areas little can be seen through the dense vegetation although much can be heard. The magnificent dawn chorus of the forest starts with the territorial claims of gibbons proclaiming to the world "this is my home". Other inhabitants staking their claims, shouting a warning or attracting a mate include insects and birds. At the end of the day the buzz of cicadas and the flickering lights of fireflies lull the forest and its neighbours into a false sense of security, masking the predators lurking in the shadows, waiting to pounce. Although a glimpse of such creatures may be seen, for the most part the fauna of the forests remains largely hidden.



Special Species

Just some of the incredible species that call the Annamites home...

Saola- In 1992, scientists first discovered a new species of large mammal, the saola. Few people could have expected such a large and taxonomically unique animal to remain undescribed so late in the twentieth century. Initially described from horns found in the homes of hunters in Vietnam the saola was named after a pair of wooden posts that support part of the local weaving spindles, which its long tapered horns resemble. Twelve years after its discovery, the saola has still never been seen in the wild by biologists and has only been recorded twice by camera traps. Our knowledge of the saola is so limited that we can only say that the population is restricted to a few forest areas in Lao PDR and Vietnam within the Annamite Chain and its foothills.

Javan rhinoceros- Only two known populations of Javan rhinoceros remain in the world; and one of these is found in the Greater Annamites. This enormous mammal, weighing up to 1,500 kg lives in the southern portion of the Annamites in Cat Tien National Park in Vietnam. The Javan rhino is probably the rarest large mammal species in the world, and is on the brink of extinction.

Crested argus- Restricted to Vietnam, Lao PDR and a small population in Malaysia, this large pheasant is distinguished by its huge tail feathers which are up to 10cm wide and nearly 1.8m long in adult males. When spread, the tail feathers display a beautiful and complicated pattern of chestnut and almost white eye-shaped spots on a grey background. This increasingly rare bird is found in wet evergreen forests from sea level to 1,700m.

Douc langur- Often considered one of the most beautiful and threatened primates in the world, the douc characterises the mystery, fragility and beauty of the Greater Annamites ecoregion. Three species of douc are found in the ecoregion – the red-, grey- and black-shanked. It seems likely that in times past, the wet forests that are home to the douc langur were reduced in size, perhaps due to climate change. The different populations of these monkeys evolved into separate species during this isolation. As their names depicts, the colour of the shanks of the douc vary from grey and black to a deep red. Marked with sharply contrasting patches of colour, complimenting a bare hairless face and expressive eyes doucs are among the most striking animals of the region. The douc langurs, known as five coloured monkeys in Vietnam, are found only in the Greater Annamites.

Vietnamese ginseng- The number of endemic plants in the Greater Annamites is very high. One of the most economically and culturally valued plants found in both Vietnam and Lao PDR is Vietnamese ginseng (*Panax vietnamensis*), which is now increasingly rare. Long used as a secret medicine by the Sedang ethnic group, it was only 30 years ago that the outside world became aware of this medicinal treasure. The roots and rhizomes of this plant are used for treating various conditions from diseases such as asthma, to reducing fatigue and boosting the immune system. Vietnamese ginseng was also used during the war to help soldiers recover from gunshot wounds. The first commercial plantation is now being cultivated in Kon Tum province, which should help to reduce the pressure on wild stocks.



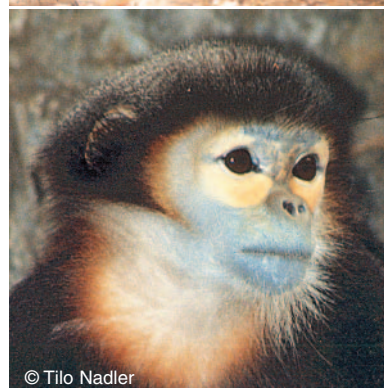
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People, land and resources

Most of the remaining biodiversity in the Greater Annamites is found in upland areas. The biological diversity celebrated by scientists is complemented by an incredible cultural diversity of more than 70 different ethnic groups throughout the range of the Greater Annamites.

The cultural melting pot of the Greater Annamites is such a mixture that neighbouring villages may share little in the way of character, customs, cuisine, dress and even language. Originating from Polynesia, or Mon-Khmer ancestry, many communities still attempt to retain their cultural and agricultural practices and therefore have a heavy reliance on natural resources.

The inter-twined relationship between people, land and resources is evident throughout the Greater Annamites. The region as a whole has evolved into a haven of exceptional bio-cultural diversity where cultural and biological diversity co-exist.

For generations people in these uplands areas of the Greater Annamites used forest resources wisely and sustainably, according to traditional customs: taking only what they needed, building houses and furniture from timber and bamboo, using grasses and rattan for weaving baskets and bags, and harvesting hundreds of plants for medicinal purposes.

Most of these groups do not claim land as private property and use land and forest resources according to communal arrangements. Each ethnic group has its own distinct traditions relating to natural resource exploitation and management. Not surprisingly some ethnic groups are more knowledgeable about the plants and animals of the forests around them than scientists. Scientists are learning about the Greater Annamites with the help of people whose families have depended on forest resources for their livelihoods for thousands of years.





The lives of the peoples of the Greater Annamites have long been tied to their land. Their whole culture is linked to their environment; they have been using what they find around them to stay alive for thousands of years. These people live hard lives, but have found ways to live in harmony with their surroundings.

Villagers in Nakai-Nam Theun National Protected Area can name more than 700 non-timber forest products (plants and animals) that they use in their local economies, and villagers in Xe Kong Province have identified more than 800 species of plants and animals are part of their diet. This illustrates the uniquely high importance of biodiversity to rural livelihoods in the Greater Annamites

The Ruc people have been living in harmony within one of the region's most biodiversity rich forests for thousands of years. The Ruc migrate through the limestone forest shared by both Vietnam and Lao PDR – not bound by political frontiers. The Ruc are dependent on harvesting forest products such as the Doac tree, which contributes to their diet, provides poles for their temporary homes, and its bark is distilled for alcohol. The knowledge of the Ruc people is vital to the conservation of the region's biodiversity.

The Khamu Rok people of Lao PDR have been using the forest wisely for generations. Conservation activities that are part of their own culture include: only cutting branches from trees larger than 40cm in diameter, planting hedgerows to control erosion, using firebreaks to stop the spread of forest fires, protecting vegetation at the summit of hilltops and use decaying leaves to nurture young growing trees. The Khamu Rok people are great ambassadors for wise resource use and conservation activities.

...but all this magnificent diversity is at risk...

Just as we begin to understand the vast diversity of life found in the Greater Annamites, we realise this unique environment is under threat. This region faces dangers today that may destroy what has been built up over many thousands of years. Critical threats to the area are many and include agriculture, logging, hunting, fishing, the wildlife trade, exploitation of forest products, and infrastructure development. All of these are exacerbated by the increase in human population and immigration of other ethnic groups into the area bringing with them different and often unsustainable ways of life. Such threats may, if unchecked, irreparably destroy the landscape of the Greater Annamites within the next few years.



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Disappearing forest

In the past, this entire area was blanketed by forest, but today many patches have been cleared or degraded from past warfare or more recent human pressures. Habitat loss represents the greatest long-term threat to the integrity of biodiversity in the Greater Annamites. Forest cover has been substantially reduced through the region. The rate of forest loss has been particularly acute in the lowland areas, especially on the Vietnam side of the Annamite mountains.



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Losing traditional knowledge

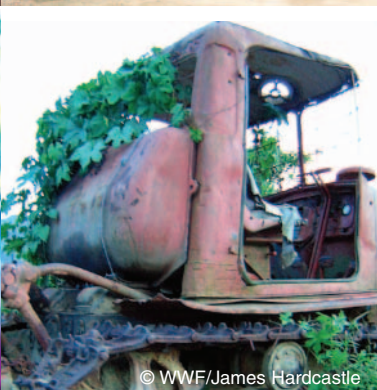
An increase in human population has led to an influx of immigrants searching for land. Many of these people bring with them their own customs and methods of agriculture, many of which are not suited to their new home. With increasing displacement and disruption of traditional livelihoods, many ethnic groups are rapidly losing their cultural identities and much of their traditional and indigenous knowledge. Of the 40 ethnic groups living on the Vietnamese side of the Greater Annamites 19 are indigenous to the area.



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The sorrow of war

War affected not only people and their livelihoods, but also the region's rich natural heritage. Large areas were wiped out by 75-85 million litres of defoliants, containing lethal toxins such as dioxin. Agents orange, white and blue rained down on village communities, forest and agricultural land and worst hit was the long Annamites mountain chain. When viewed from the air, massive scar lines caused by defoliant can still be clearly seen in the vegetation of the area.



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What is happening in the Greater Annamites?

Just as the threats and challenges vary, so do the solutions. From sustainable forest management to species-specific work, a range of initiatives is working to conserve the Greater Annamites in the most effective way.

There are already some positive signs of success:

Sustainable development and biodiversity conservation

Both Lao PDR and Vietnam are signatories to the UN Convention on Biological Diversity, demonstrating their policy commitment to biodiversity conservation. This commitment is further strengthened by the development of National Environment Strategies, Biodiversity Strategies and Action Plans and the Forestry Strategies in Vietnam and Lao PDR. The National Growth and Poverty Eradication Strategy in Lao PDR, promotes a natural way of development, called the Thammasat way of development. This is a harmonious triangular approach to development, where development is dependent on three legs: economic growth, social/cultural development, and conservation of natural resources. Economic growth must be based on sound management of natural resources and enhanced social and cultural development.

Protected areas

Protected Areas were established through the region before the establishment of the current democratic republics. Since the 1960s Vietnam has developed a network of protected areas, 44 of which are in the Greater Annamites, and cover almost 1.4 million hectares. In 2003 the government launched a comprehensive protected area strategy, which proposes that many new areas become protected. In 1993 a large scientifically-designed protected area system was established in Lao PDR including 10 National Protected Areas in the Greater Annamites, which total more than 1.6 million hectares and make up some of the largest blocks of natural habitat remaining in the region. Protected areas in the Greater Annamites now cover approximately 16% of the total area and they range from 20,000 to 350,000ha in size. Both governments are increasing education and awareness about biodiversity issues, and are encouraging public participation in protected area activities.

Sustainable forest management

Great advances have been made by the government of Vietnam in the forestry sector. Programmes such as the 5 Million Hectare Reforestation project have worked since 1999 to protect, maintain and reforest a vast area of the nation's forest which is excellent news for biodiversity conservation. The government of Vietnam is also taking steps to reform the State Forest Enterprises, which are responsible for the country's production forests. In Lao PDR, a National Forestry Strategy to the



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Year 2020 is being developed and is currently under approval at the Ministry of Agriculture and Forestry. The Government of Lao PDR is currently engaged in Sustainable Forest Management and is working towards Forest Certification being applied to production forests. Policies are also in place to facilitate participatory sustainable forest management of natural production forests at the village level.

Species actions

Both within and outside protected areas activities to monitor and protect some of the world's most endangered species are underway. Bringing scientists together to create a conservation action plan to conserve the newly discovered saola, establishing a Javan rhino patrol team for one of only two remaining global populations, and using landscape planning to assess and develop conservation strategies for elephant populations in Lao PDR are just some of the most recent activities in the region.

Dealing with the biggest threats

In Vietnam, a new national Wildlife Trade Strategy supported by TRAFFIC and approved by the government is being launched. This programme builds on earlier training of wildlife law enforcement officials to improve implementation and enforcement of The Conservation on International Trade in Endangered Species of Wild Fauna and Flora (CITES) in Vietnam. Previously regarded as an almost 'taboo' subject, the government of Vietnam is now committed to halting the illegal wildlife trade, one of the biggest threats to conservation efforts in the region. Lao PDR has recently signed the CITES convention. Building up to becoming a signatory to the convention department of forestry staff were trained as trainers and border guards around the country have been trained in forestry law and international CITES legislation.

Landscape level planning

In recent years, global efforts to conserve the natural diversity of life on earth and the ecological processes, upon which we all depend, have turned increasingly to focus on larger scales. This shift reflects a growing consensus that thinking and action across large scales can better address both the need to conserve viable species populations and ecosystem processes and the need to integrate conservation and human development.

During 2003-2004, Lao PDR and Vietnam prepared conservation action plans for their respective components of the Annamite mountain range. The two national plans identify threats to biodiversity and sustainable development in the region and define priorities for action. These conservation action plans provide a framework for essential activities both inside and outside protected areas for the coming years.

These national conservation action plans will give a stronger direction and purpose to the conservation of the Greater Annamites. These are early days, and there is still a long journey ahead to realise the vision of collaborative planning for the future. All efforts will work within a framework aiming to retain the Greater Annamites as one of the world's most precious areas of unique wildlife. It will take time to accomplish this, but by doing so, we can be confident that this program will be the most effective and beneficial to the Greater Annamites as a whole.

Our vision is that 'the biodiversity, values and function of the ecosystems in the Greater Annamites Ecoregion will be restored and maintained to contribute to sustainable economic, social and environmental development in Vietnam and Lao PDR'.



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WWF is channelling funds towards the programme in an attempt to conserve this region as best as possible, but we can't do it alone. The Greater Annamites needs you! We are calling for your help, your generosity, your determination and your cooperation. You are vital to give the people, plants and animals of the Greater Annamites hope for the future...



for a living planet

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Compiled by Steph Cox
Photo research by Nguyen Thi Dao

WWF Indochina Programme

WWF Vietnam Country Programme
International P.O. Box 151
Hanoi
VIETNAM

Telephone 84 (0) 4 736 6375
Fascimile 84 (0) 4 736 6376

WWF Lao Country Programme
P.O. BOX 7871,
Vientiane
LAO PDR

Telephone 856 (0) 21 216 080
Fascimile 856 (0) 21 251 883

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