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Species fact sheet: Giant Pandas



Despite being universally loved and the symbol of a nation, the giant panda's future remains uncertain

Giant panda, Wolong Nature Reserve, China. © WWF-Canon / Susan A. Mainka

Peaceful and mostly vegetarian, giant pandas have steadily lost their forest habitat to China's expanding human population. These striking animals are now confined to fragmented forest patches high in the mountains of southwestern China. These same mountains form the watershed for China's Yangtze and Yellow Rivers, whose basins are the economic heart of China and home to over 500 million people. As China's economy continues its rapid development, it is more important than ever to conserve the forest home of the giant panda — not just to safeguard this well-loved species, but to maintain the subsistence

fisheries, agriculture, and water resources essential for nearly 40 per cent of China's people.

There is only one species of giant panda:

A member of the bear family, the giant panda is the only species in its genus. The animals have the digestive system of a carnivore, but have adapted to a vegetarian diet and depend almost exclusively on bamboo as a food source. The most recent study of giant pandas and their habitat revealed there are nearly 1,600 in the wild.

At a glance:



Species: Giant panda (*Ailuropoda melanoleuca*)
Habitat: Temperate broadleaf and mixed forests
Location: Southwestern China
Population: 1,600
Status: Endangered (IUCN–The World Conservation Union)



© WWF / Fritz Pölking

What are the problems facing giant pandas?

Habitat loss

Giant pandas were once widespread in southern and eastern China and in neighbouring Myanmar and north Vietnam. Due to expanding human populations, the animals are now restricted to some 20 isolated patches of forest above 1,200m on six mountain ranges in southwestern China: Minshan, Qinling, Qionglai, Liangshan, Daxiangling, and Xiaoxiangling. Analysis of satellite imagery shows that giant pandas lost 50 per cent of their already vastly reduced habitat between 1974 and 1989.

The major factors disturbing panda habitat today are conversion of forests to agricultural areas, medicinal herb collection, bamboo harvesting, poaching, and large-scale development activities such as road construction, hydropower development, and mining. Because of China's dense human population, many panda populations are isolated in narrow belts of bamboo no more than 1.2km wide — and panda habitat is continuing to disappear as settlers push higher up the mountain slopes.

A network of nature reserves provides protection for around 60 per cent of the current panda population. However, due to the presence of humans the animals cannot migrate between these far-flung habitat blocks. This not only gives them less flexibility to find new feeding areas during periodic bamboo die-back episodes, but the

small, isolated populations face a greater risk of inbreeding — which can lead to reduced resistance to disease, less adaptability to environmental changes, and reproductive problems.

Illegal trade

In the 1980s and 1990s, there were a number of cases of panda poaching, but this has declined due to strict laws and greater public awareness of the panda's protected status. However some poaching still occurs, with several panda pelts on sale for large sums of money being confiscated in recent years. There is little information about the dynamics and dimensions of this market, but even at low levels poaching can have grave consequences for such an endangered species. Pandas are also unintentionally injured or killed in illegal traps and snares set for other animals, such as musk deer and black bears.

Bamboo 'die-back'

Bamboo die-back is a natural phenomenon, occurring every 15–120 years depending on the type of bamboo. Once the bamboo dies it can take a year to regenerate from seed and as long as 20 years before the new plants can support a giant panda population. Bamboo die-back may have helped to disperse giant pandas in the past, as individuals migrated to seek areas with other species of bamboo. However, human settlements now form a barrier against giant panda movements, and prevent the animals from finding areas where bamboo is still plentiful.



Above: Giant panda, Chengdu Breeding Centre, China. © WWF-Canon / Michel Gunther
Right: Giant panda, Wolong Nature Reserve, China. © WWF-Canon / John MacKinnon



Giant panda eating bamboo, China. © WWF-Canon / Martin Harvey



Using radio tracking to follow giant pandas, Wolong Nature Reserve, China. © WWF / George B. Schaller



WWF volunteer taking visitors into giant panda habitat, Qinling Mountains, China. © WWF-Canon / Michel Gunther

What is WWF doing to reduce threats to giant pandas in the wild?

WWF considers the giant panda as a 'flagship' species: that is, a charismatic representative of the biologically rich temperate forest it inhabits. By conserving the giant panda and its habitat, many other species will also be conserved — as will water resources that are essential for the future of hundreds of millions of people.

WWF has been active in giant panda conservation since 1980, and was the first international conservation organization to work in China at the Chinese government's invitation. Early work included the first-ever intensive field studies of wild panda ecology and behaviour.

Current work focuses on two priority areas, the Minshan Mountains in Sichuan province and the Qinling Mountains in Shaanxi province. Projects include research, monitoring, patrolling against poaching and illegal logging, and building local capacities for nature reserve management. In addition, WWF supports social development projects including ecotourism and training for local communities.

Highlights of WWF's panda conservation work include:

1. In 1992, the "National Conservation Management Plan for the Giant Panda and Its Habitat" was created, a major milestone in the first decade of cooperation between WWF and China's State Forestry Administration. The plan, which WWF is helping to implement, calls for additional nature reserves,

improvements to existing reserves, and the creation of habitat corridors to reconnect isolated panda populations. By mid-2005, the Chinese government had established over 50 panda reserves, protecting more than 10,400km² and over 45 per cent of remaining giant panda habitat.

2. In 1997, WWF initiated a community-based conservation programme in Pingwu County, Sichuan province, home to the largest concentration of pandas in China. The programme teaches local people how to protect panda habitat without compromising their economic livelihood, by training them in sustainable logging methods, introducing new income-generating activities like ecotourism, and raising local awareness about conservation.

3. Between 1996 and 2000, WWF trained more than 300 panda reserve staff and local government officials in nature reserve management, wildlife monitoring, anti-poaching patrolling, and innovative community-based conservation approaches.

4. In 2004, the results of the most comprehensive survey of China's giant panda population revealed that there are nearly 1,600 pandas in the wild, over 40 per cent more animals than previously thought to exist. These findings came from a four-year-long study of pandas and their habitat carried out by the State Forestry Administration of China and WWF. The survey also provided information on where giant pandas are living and the condition of the forests and bamboo they depend upon. The survey discovered pandas living in regions not thought to have the species, and also pinpointed a number of threats to their long-term survival, including deforestation and continued poaching.

Focus Project: Qinling Panda Focal Project

Like the backs of sleeping dragons, the peaks of the lush Qinling Mountains poke through the clouds and evoke mystery and wonder in all who lay eyes on them. These mountains are one of the few remaining places where the giant panda lives in the wild, along with other endangered animals such as the golden monkey, the crested ibis, the golden eagle, and the clouded leopard.

The area has a long human history. It was the cradle of Chinese civilization, and today the two river basins it feeds — the Yangtze and the Yellow Rivers — form the economic heart of China, home to nearly 40 per cent of China's people.

Over thousands of years, the mountain forests of Qinling have become smaller as people created new agricultural land. The lowland forests have long disappeared. Now people are moving yet further up the slopes — and the pandas' forest home is becoming smaller and more fragmented.

No more than 300 giant pandas remain in the Qinling Mountains, spread amongst separate ranges. The threats faced by the pandas reflect the major issues of wildlife conservation as a whole: habitat loss, degradation, and fragmentation; poaching; and conflicts between conservation and development. The pressure is expected to grow rapidly after implementation of the Western China Development Programme. If nothing is done, the Qinling pandas may disappear along with their forests.

WWF's vision is that by 2012 the Qinling giant panda population will have increased by at least 10 per cent and its protected habitats by at least 80 per cent. Officially launched in 2002, the Qinling Panda Focal Project is based on the belief that a balanced future for both conservation and development depends on the participation of all. A key aspect of the work is therefore the involvement of people not normally involved in conservation — including businesses, farmers, and local governments — to apply sustainability in their policies and patterns of consumption.

The work has three major components. The first is to establish a reserve network in the Qinling Mountains. To achieve this, WWF is working with the Shaanxi Forestry Department to facilitate the creation of new panda reserves and ecological corridors. The first five panda reserves were created in 2003 along with five ecological corridors, with another seven reserves to be created by 2006.

The second component promotes cooperation between conservation and tourism development in the southern

Taibaishan region, in order to mitigate further loss and fragmentation of panda habitat due to uncontrolled and random tourism activities. Examples of work include regulating tourism development in Laoxiancheng Reserve by assisting five selected households to develop home-stays and developing eco-trails in Taibaishan Nature Reserve.

The third component aims to engage the local community in conservation activities by working with different stakeholders (such as local government, businesses, and institutions involved in conservation, agriculture, and poverty alleviation), to seek win-win solutions that lead to better conservation and long-term sustainable development.

For example, WWF supported farmers in Laoxiancheng Reserve by substituting traditional bee hives, which needed to be replaced with new logs every year, with more durable hives. The new hives not only help reduce the consumption of trees, but the farmers who benefited will assist with regular patrolling of panda habitat. Similarly, WWF supported farmers in Changqing Nature Reserve with energy efficient stoves, which reduce fuel wood consumption by 50–70 per cent compared with traditional stoves, and is assisting with various community development and alternative livelihood projects. This has helped villagers restructure their former logging-based industries, which ceased operation after China's 1998 logging ban, and considerably decreased illegal logging and poaching.

WWF is also supporting a wildlife conservation team created by Houzhenzi Forest Farm, the first forest farm in Shaanxi province to take part in wildlife conservation. The 30-member team is protecting and monitoring some 500km² of panda habitat on the northern side of the Qinling Mountains.

The Qinling Mountains are part of the Southwest China Temperate Forests Ecoregion and the Yangtze Rivers and Lakes Ecoregion — two of WWF's Global 200 Ecoregions, biologically outstanding habitats where WWF concentrates its efforts.



Qinling Mountains, Shaanxi Province, China. © WWF-Canon / Michel Gunther

Find out more...

This fact sheet is designed to give a broad overview of some of the threats faced by giant pandas, and to give examples of WWF and TRAFFIC's work and solutions on the ground. For more detailed information on species, WWF, TRAFFIC, and the work we do, please visit www.panda.org/species and www.traffic.org

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