



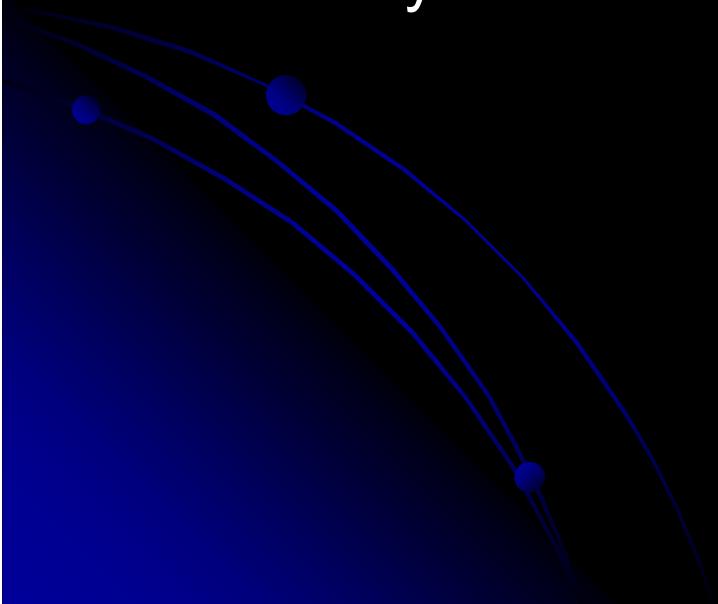
# New Paradigms and Resilience for Responsible and Sustainable Tourism in Developing Countries

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The world is facing a series of problems that are unprecedented in scale.

As the Secretary General of the United Nations, Ban Ki Moon, said on 6 July 2009:

“The last two years have witnessed a cascade of interconnected crises: global financial calamity, rising food and oil prices, climate shocks, a flu pandemic, and more. Political cooperation to address these problems is not a mere nicety. It has become a global necessity.”



The intensity of global interconnectedness is stunning.

## **H1-N1 INFLUENZA VIRUS (swine flu)**

- H1-N1 influenza virus (swine flu) was identified in a Mexican village in April 2009. By July it had reached more than 100 countries.
- It has in fact spread faster than the previous influenza virus that devastated the tourism economies of many countries, Asian nations in particular – SARS, or Sudden Acute Respiratory Syndrome influenza – just 5 years ago.
- At this point in time its morbidity appears to be significantly less than SARS, but the global response orchestrated by the UN World Health Organization in Manila, underlines once again the inter-connectedness of this modern 21<sup>st</sup> century world in which we live.

## **GLOBAL FINANCIAL CRISIS**

The spread of the current global financial crisis was even faster

- The effects of the collapse of the American financial investment institute Lehman Brothers in September 2008 were transmitted worldwide within days. Stock markets all around the world lost billions, possibly trillions.
- And within a few short months even the most remote villages in Africa, Asia and Latin America were feeling the shocks of reduced remittances, cancelled investment projects and falling export prices.
- The World Bank and the IMF forecast that the entire world will take two to three years yet to recover from recession.

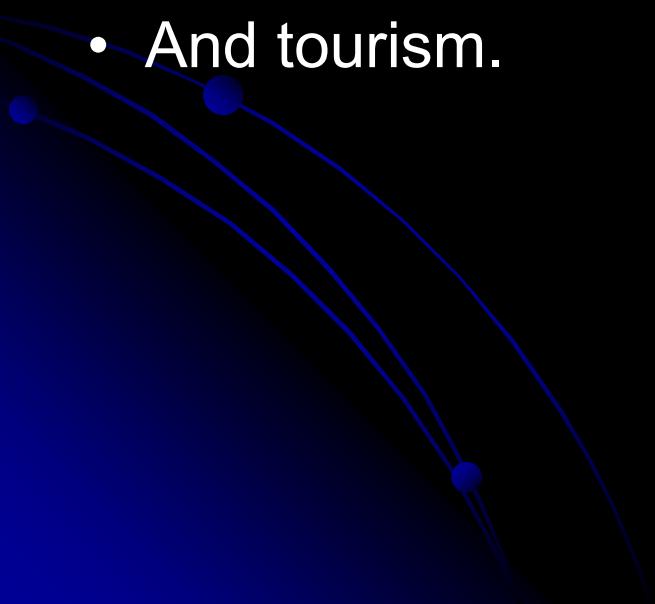


## CLIMATE CHANGE/GLOBAL WARMING

- In a similar way climate change in different parts of Europe, Asia, Australia and the Americas in recent years has contributed to soaring food prices that have hit the poor and created instability and hardship in dozens of countries.
- Every country faces worsening climate shocks that result from worldwide greenhouse gas emissions, not just from those that they may produce within their own national borders.
- Hence the need for global action that transcends national jurisdictions, as asserted by Secretary General Ban Ki-Moon.



- Global cooperation, though somewhat limited, has been effective in mitigating the financial meltdown that began last year.
- The global response to swine flu has almost certainly been effective in reducing its impact.
- The power of global partnership now needs to be brought to bear on climate change, poverty reduction and food production.
- And tourism.



As American tourism doyen, Bryan Farrell, recently said:

*“All of these crises touch every aspect of tourism, both human and natural.*

He went on to say:

*Every place that is affected is likely to be so in quite a different way and certainly not in a manner with which existing models are able to cope.*

*This situation calls for a rapid re-evaluation of the way in which tourism analysis is conducted and in the way we should all perceive tourism.”*

(Farrell, pers comms, Jun 2009)

# *“The Impact of Tourism on Natural Resources, Communities and the Global Environment”*



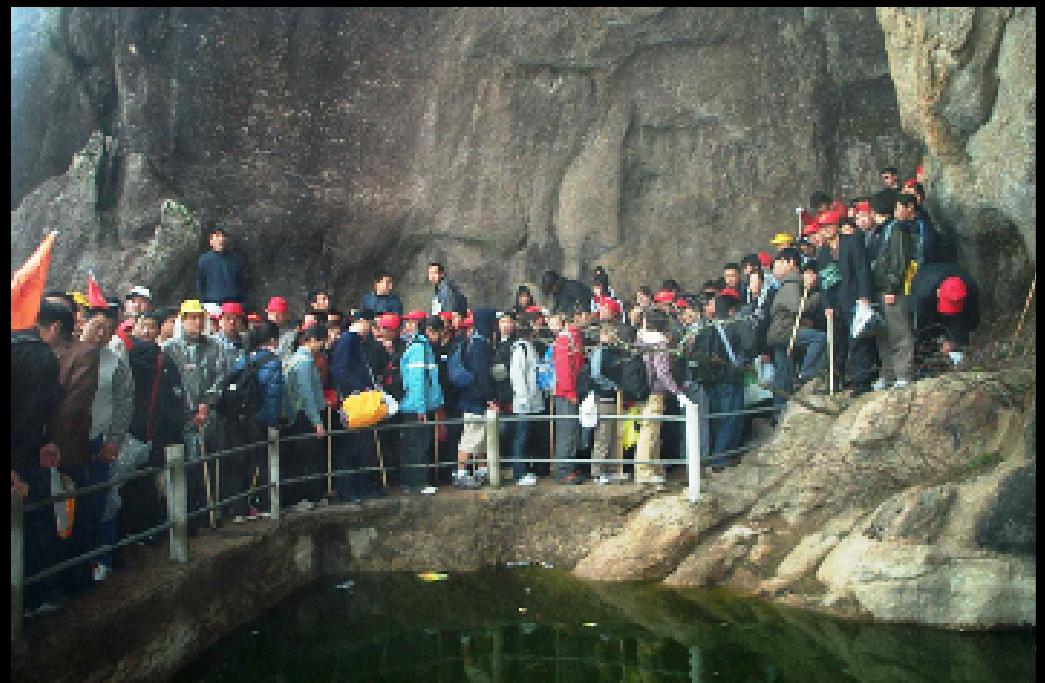
## **The need for new paradigms ....**

- In approaching this topic for the World Ecotourism Conference, I want to emphasize at the outset that my contribution will focus on what I believe I may be able to offer as an academic, although I have also been an island resort owner/operator (for 14 years) and I undertake significant policy and planning consultancies and project development management (e.g. as Team Leader for the Mekong Tourism Development Project in Cambodia and Vietnam, 2005-2008).
- I will leave it others more versed in those areas to comment from the platforms of their specializations while I focus on just a few theoretical issues of the many issues the industry faces.

## The need for new paradigms ....

As an academic I am concerned that the study of tourism appears trapped in “a consensus of confidence” (Farrell 2009), convincing so many of us that what we have will ultimately get us through the future. After all, we know how resilient tourism is.

- This is wrong.
- It is no more resilient than any other component of the economy.



# RESILIENCE

A systems approach will give us much better capacity to plan for sustainability, an essential factor of which is resilience.

What is resilience?

It is the capacity to resist destabilizing changes to a state of equilibrium, to weather forces of damage/turbulence/downturns and over time, through maintaining and/or strengthening major system variables, to return to the old equilibrium.

In a tourism business context it means having the resources to withstand all disturbance other than major devastation while ensuring that the business continues to function, albeit at a reduced level, before recovering to pre-existing levels.

## RESILIENCE

Resilience also needs to be addressed in the context of both risk and uncertainty since the future will contain ample measures of each.

These three concepts (resilience, risk and uncertainty) are fundamental to the capacity of the tourism industry – in its myriad forms and types – to adapt to change and considerations of what will constitute sustainability if or when the former state of equilibrium on which that sustainable development was based no longer survives or continues but in a dramatically changed configuration.

Equally the cautionary principle may become much more difficult to define and implement.



What are some of the key factors I believe we need to incorporate into our analysis and understanding of tourism if we are to take it forward into the 21<sup>st</sup> century as sustainable, responsible and resilient ?

1. We need to take a **systems approach**;
2. We need to understand that **social-ecological systems (SES's) are place/site specific**; BUT
3. We also need to consider our **scale** of analysis to encompass the regional, national and international surrounds of places and sites; and this of necessity includes *inter alia* -
4. putting the **travel** back into tourism;
5. We need to accept the **inevitability of dynamic change**; &
6. **Non-linear analysis** and **multi-disciplinarity**.

As we move through these issues, some existing orthodoxies and taken-for-granted concepts and paradigms will be challenged.

I emphasize that I am not asserting that the views I will present are ‘right’ or ‘correct’. Rather that occasionally we need to dust off the cobwebs to see whether the signpost is still pointing in a direction that will lead to innovation and progress - or whether we are headed down an unproductive path.



## A SYSTEMS APPROACH

My suggestion is that to understand tourism thoroughly we need to embrace **the tourism ecosystem** in its totality and in its connectivity both internally and externally, moving away from the general tendency of a rather narrow focus on the business of tourism as an economic activity,

“Ecosystem” is used here not in the old sense as a natural ecosystem but in its newer and growing use as an integrated human-natural ecosystem - as conceived for example, in *urban ecosystem studies*, or *agro-ecosystem*

- *studies or, in our case as a social-ecological system* in which tourism plays a dominant, highly influential part.

This is *spatially specific* and essentially fits the notion of a destination, or a regional tourism area (Farrell 2009).

## A SYSTEMS APPROACH

- The Earth operates as a system and all its components operate as systems too. Tourism at a destination with all its outward manifestations and connections constitutes a coupled social and ecological system (SESs).
- There has been significant discussion about the role of humans and nature within the Earth system from the 1960s and whether they were integrated and if so how. One significant advance came about in the 1990s when the Ecological Society of America in a report clearly established that humans, their activities and artifacts were an essential part of all ecosystems (Farrell 2009).
- Some ‘extreme greenies’ will still dispute this, as will some economists; but mainstream thought is accepting of the paradigm shift this concept entails.

## A SYSTEMS APPROACH

Research concerning such integrated systems is to be found in prestigious journals such as *Nature* and *Science*. In 2007 a distinguished group of sixteen social and biophysical scientists, made a statement in *Science* that would never have been published thirty years ago,

- *"Integrated studies of coupled human and natural systems reveal new and complex patterns and processes not evident when studied by social or natural scientists separately".*  
(One of the authors is now lead adviser on climate change to President Obama).

(Farrell, 2009)

## A SYSTEMS APPROACH INSUFFICIENT KNOWLEDGE / MULTI-DISCIPLINARITY

Research undertaken by interdisciplinary teams rather than by individual researchers or even teams of same-discipline expertise will be able to provide the best theoretical approaches to analysis, no one expert being more important than the other.

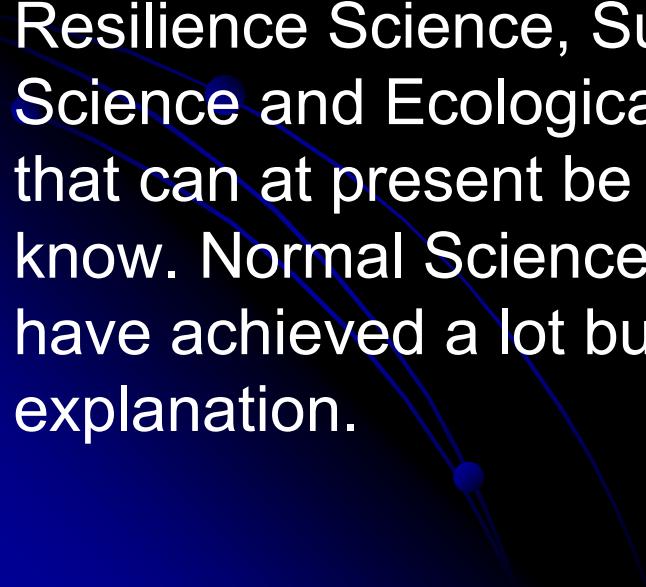
- But in tourism studies our present researchers tend to be far too narrowly confined and globally we have many more departments of tourism in faculties of Business Management than in Environmental Science, Cultural Studies or other social science disciplines.

## A SYSTEMS APPROACH

## INSUFFICIENT KNOWLEDGE / MULTI-DISCIPLINARITY

We need to be aware when we embark on such new multi-disciplinary endeavours that tourism, along with most other studies, face imminent crises with both limited tools and insufficient knowledge to work with.

We have achieved a lot but the work of international scientists from Global Change/ Earth System Science, Resilience Science, Sustainability Science, Complexity Science and Ecological Economics bring new knowledge that can at present be incorporated with what we already know. Normal Science approaches, stressing reductionism have achieved a lot but give a restricted and partial explanation.



## A SYSTEMS APPROACH

## INSUFFICIENT KNOWLEDGE / MULTI-DISCIPLINARITY

Sustainable tourism is impossible to attain without the incorporation of much of this knowledge yet I see scant evidence that tourism schools are moving in this direction.

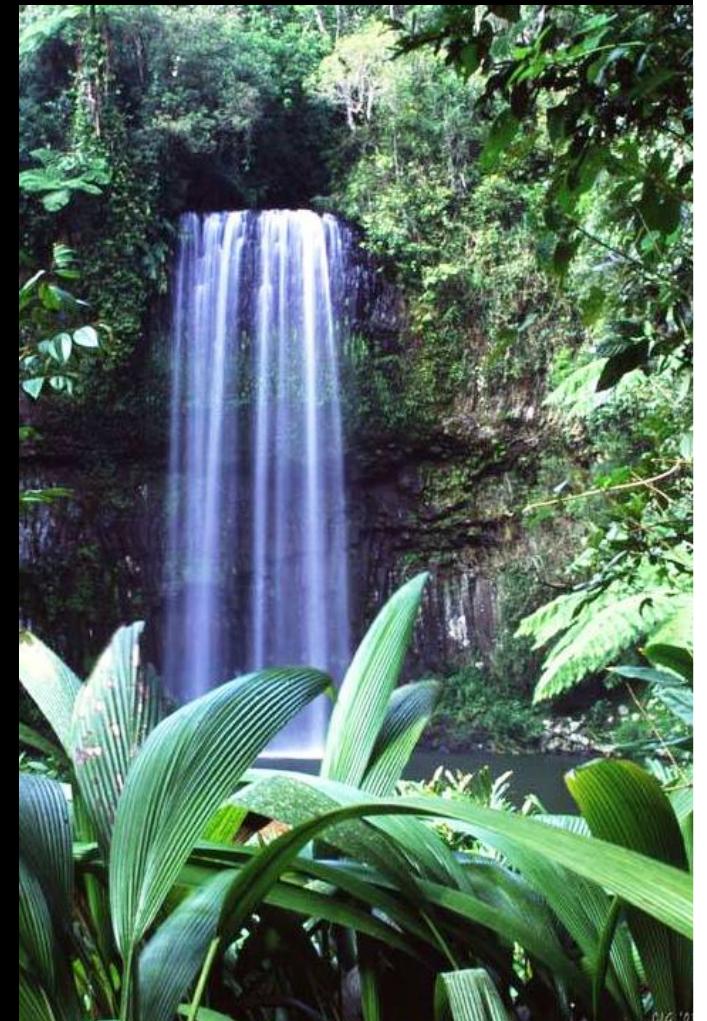
It requires a paradigm shift in scholarly perspectives and educational institutions if we are to find more complete explanations and problem solving outcomes to the vexatious issues of pursuing responsible, sustainable and resilient tourism.



## A SYSTEMS APPROACH & POVERTY ALLEVIATION

A systems approach can improve capacity to utilize tourism as a tool for poverty alleviation of communities because of the integration with supply chain and value chain analysis.

Community based tourism (CBT) interventions rely almost exclusively at present on the identification of a community resource as an attraction – a waterfall, a rainforest, a cave, interesting traditional activities, cultural performances, handicrafts, home-stay, and so on. Those communities without such an attraction at present fall outside the ambit of CBT.



## A SYSTEMS APPROACH & POVERTY ALLEVIATION

The tourism system includes not only ‘front line’ sectors such as the source market, and the destination with its five ‘A’s (Attractions, Accommodation, Activities, Access, Amenities) but ‘invisible’ sectors such as the ‘Support Services Sector’ – that is all the linkages into the thousands of businesses and operations which provide products and services for the front line sector.

They are ‘invisible’ in tourism because they do not deal directly with tourists;

- but without their support the front line sector could not function.

## A SYSTEMS APPROACH & POVERTY ALLEVIATION

The front line sector consumes literally thousands of different products however, and so when we apply supply chain and value chain analysis we may be able to identify any number of resources owned by communities that could be developed for the tourism industry.

i.e. ventures utilizing resources of communities such as a rocky mountain that could be used to cut blocks for paving stones or building materials for resort construction, or a Thai rainforest village that can grow orchids for hotel foyers, restaurants and Thai airways.

The communities never host a tourist (thus avoiding any potential adverse socio-cultural impacts) but through their new inputs into operators their income is generated by the tourist dollar.



## A SYSTEMS APPROACH & POVERTY ALLEVIATION

The other side of the coin is that communities may be able to absorb, utilize and recycle tourism-generated waste for income supplementation (i.e. use outputs from operators).

A recent example from Brazil demonstrates how impoverished communities located on the periphery of the mass tourism enclave of Bahia have benefited from this approach. Since 2007 the organic wastes from several resorts go to a waste recycling plant with capacity of 5 tonnes of solid organic fertilizer per day. Currently 500 farmers use the fertilizer for improved crops and through a farmers' cooperative they sell organic fruit and vegetables back to the resorts. UNCTAD analysis indicates that in just two years farmers' incomes have doubled.

(LeClerc, pers. comms. 2009)

## A SYSTEMS APPROACH & POVERTY ALLEVIATION

This dual approach using supply chain and value chain analysis to identify opportunities for communities to link into supplying the needs of tourism operations and of finding ways to utilize unwanted outputs from the same operators dramatically expands the scope for intervention. It also exploits mass tourism in a way that current CBT fails to do.

The resultant interdependence between the stakeholders increases resilience on both sides.

I have termed this expanded paradigm of poverty alleviation in developing countries as CBtT –

**CBtT: Communities Benefiting through Tourism.**

(Sofield, *Community Tourism in Asia*. 2008)

## SES's ARE PLACE SPECIFIC

- SESs or *complex adaptive systems* are not simple as are those in the so-called 'hard' or 'pure' sciences such as particle physics where many systems are identical, based on 'universal principles' where processes can be replicated in laboratories.
- But coupled social-ecological systems are dealing with people where there is a quantum difference in variables that can effect outputs and outcomes.
  - Their identities are usually unique;
  - to a large extent defiant of the sort of control that can be managed in a laboratory where every component can be measured and certified;
  - are therefore often unpredictable, and
  - each will have its own behaviour, structure and function.

## SESS ARE PLACE SPECIFIC

Given the case that SES's will be unique we confront two more paradigms that we may need to challenge –

1. that of 'global best practice' models; and
2. the identification of 'optimal conditions' that can be applied and replicated in multiple places.

If it is indeed valid to argue that every system is unique, formed and sculptured and modified according to the specific local conditions in which it exists, then our analyses/ solutions/ lessons learnt may be place specific with a limited capacity to be transferred to other places.

Even where the focus of our analysis may be quite similar in many respects, differences may be masked by a culture with a value system or systems that negate the apparent similarities.

## SESS ARE PLACE SPECIFIC

- Sustainability science, also of great importance to global change science, stresses that what we are doing is place-based. Each place has its own identity and its own unique ecosystem/s.
- From detailed work in a place (tourism ecosystem) much may be discovered that will ultimately aid in understanding the Earth System.
- BUT because each place has its own unique qualities and characteristics they may need their own specific solutions - and thus suggests that applying 'global best practice' should be approached with caution.
- What may indeed by best practice in one country may not be so in another (example of PNG contour ridging!)

**SESs ARE PLACE SPECIFIC** - and also incorporate **cultural differences**.

- In this context for example it is suggested that there is merit in subjecting the so-called universal principles of UNESCO World Heritage Site listing to critical appraisal.
- This is NOT to dispute the concept of WHS listing - there are indeed many sites, places, monuments, etc that are worthy of World Heritage status.
- But the principles on which WHS assessment of natural and cultural sites are based were drawn up by western experts only – and the Asian, African, Latin American and Minorities voices (such as South Pacific Polynesians or Canadian Inuit) were absent.
- In other words, two thirds of the world's peoples were not represented and their value systems, diametrically opposed to some European values, were not – and could not - be included because of this fact.

## PLACE SPECIFIC: Cultural differences

- With natural heritage, the western paradigm is that nature (wilderness) and people (culture/civilization/development) are incompatible and need to be kept apart (eg as in US national parks). It is a bio-centric perspective, and human activities are permitted in parks and reserves only to the extent that they do not threaten or degrade biodiversity.
- But in many Asian, African and Australo-Pacific societies, man and nature are indivisible.
- An Asian (Chinese) worldview, for example, has its central approach to nature embedded in the two millennia-old Daoist tenet of ‘humans and nature in harmony’, of nature being imperfect so mankind has a responsibility to improve on nature.

## PLACE SPECIFIC: Cultural differences

- In other words, cultural and natural heritage are viewed as a single unitary construct in contrast to the binary differentiation espoused by a western, positivist, scientific approach (Sofield & Li 2007).
- This western perspective is manifest in the very structure of UNESCO with IUCN (International Union for the Conservation of Nature) having separate responsibility for natural heritage and ICOMOS (International Commission for Monuments and Sites) having separate responsibility for cultural heritage.
- Hence the IUCN-guided assessment of natural heritage sites is weighted against Asian, African and other societies' values that see the world in a diametrically different way (Huangshan).

## PLACE SPECIFIC: Cultural differences

- This is not to say that one is right or wrong - (although that is what UNESCO asserts when it attempts to prevent some developments taking place by threatening to withdraw WHSL)
  - but rather that they are different.

On the other hand, where traditional values and practices can be measured in terms of environmental degradation and/or where such values may result in devaluation of human worth, then preservation of 'tradition' or 'cultural heritage' should not be used to defend such values or practices.



## PLACE SPECIFIC: Cultural differences

- The thesis I wish to advance is not that culturally determined practices and values should be accepted in all cases, but that in our approach to policy, planning, management and interpretation for natural and cultural heritage tourism in societies that are not ‘western’ there is often an unthinking assumption that ‘we’ (the west) are ‘right’, that western theories and principles are ‘correct’, and that ‘they’ (non-western ‘others’) are ‘wrong’.
- The power of the umpire (UNESCO) is unthinkingly accepted when in fact the rules which the umpire is using may be flawed and in need of reviewing.



## PLACE SPECIFIC: Cultural differences

These issues of westernization as ‘best practice’ came up at a workshop in Lijiang, China last week with 30 Chinese national parks and reserves managers.

One of their conclusions was that there was a need for a “Chinese park model” as distinct from the imposition of western models through ‘creeping globalization.’ There was they considered a need to re-assert Chinese values in order to ensure that their parks and reserves reflected their identity, albeit in ways which did not degrade the environment.

(e.g. caves, which in China are cultural not natural sites; continued use of traditional pavilions and pagodas in wilderness settings consistent with 2,200 years of recreation, the use of calligraphy (a high art form not graffiti) inscribed into rock and cliff faces, etc.)

## PLACE SPECIFIC: Cultural differences

Let us look briefly at just a couple of these to illustrate the Chinese perspective – and how something as apparently straightforward as environmental degradation will be viewed differently.

### Calligraphy

Chinese script is traditionally believed to be a gift from the gods, thus has semi-sacred connotations in its origins, and calligraphy is regarded not as ‘just writing’ but as a very high art form.

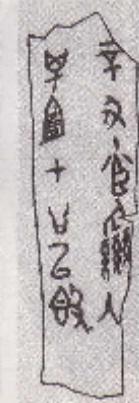
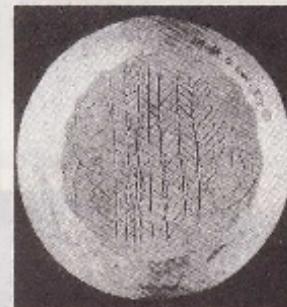
In learning to read and write (there are in total 54,000 individual Chinese characters: a university graduate will have mastered about 8,000), the same templates have been passed down through the centuries and are used today whether one is in Shanghai, San Francisco or Sydney.

# PLACE SPECIFIC: Cultural differences: Calligraphy

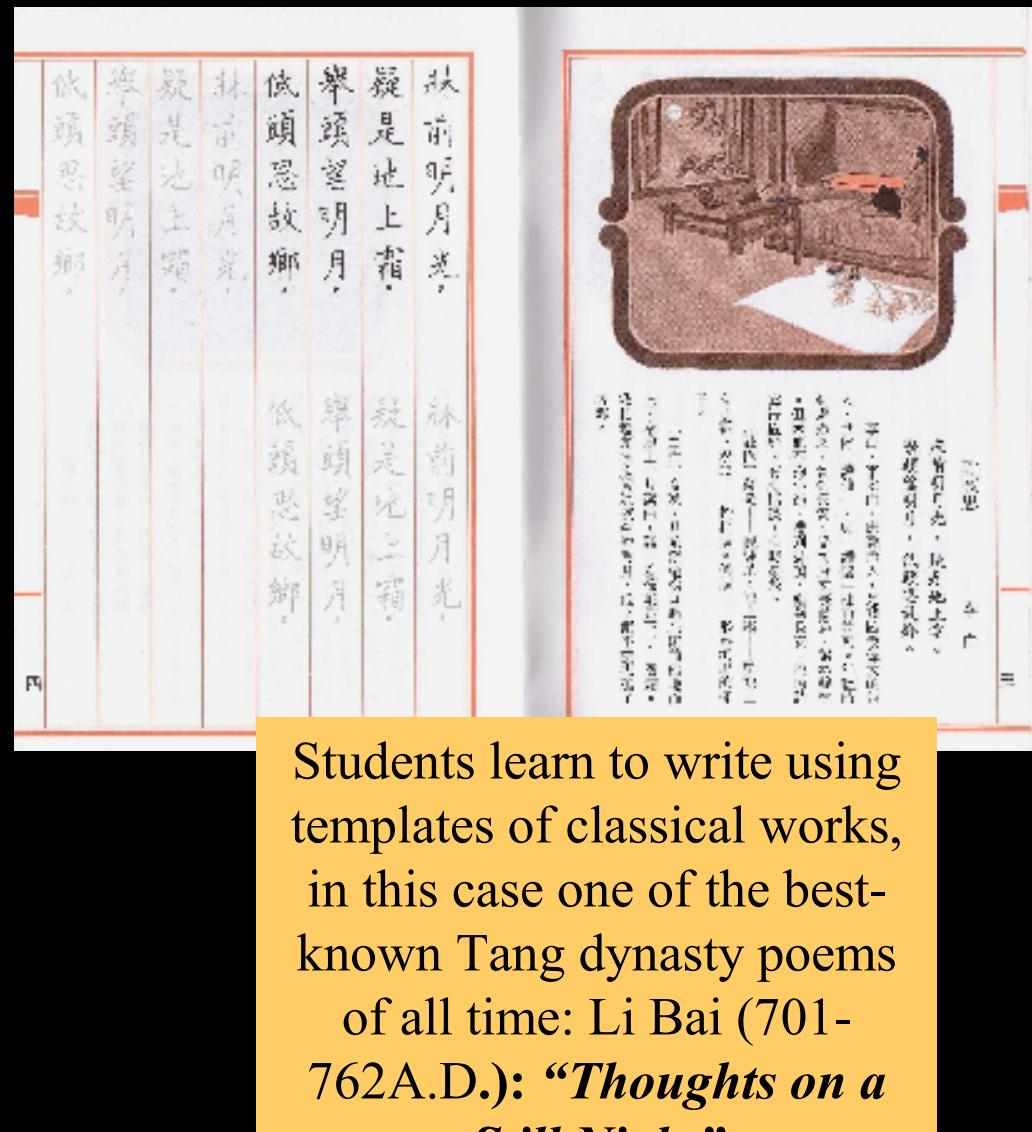
鼎內多刻有長篇或幾句短篇，如歌如泣，因平滑，所以音節便是其特有的失去作品，音代表消聲的外傳，如其古譜錄的立格，更多的就是音書（即古樂詩）歌。當它歌於歌時，則其歌於歌於歌，有歌於歌，歌於歌於歌，音體自然生焉。

在五、六、七、八等書寫中，先人墨的火種而立筆，刻各類小類的鳥、魚、蟲、花、草等，並非是用毛刷的藝術創作，而是用刻刀刻畫在木頭上的六書記作，並傳到三言兩語，四言六字的象牙書寫等，並非是刻了音書的「藝文中」。也許全都是人所知人所曉，歌于歌者，有、具、歌書刻品，各得地圖三點，歌書刻品，其與字書中不可多得的精品，而且都把歌子存，這樣就沒有歌圖與歌亂角的，再用半拉人的音符在歌歌刻品的標準，這種技術，歌的樣貌，真有詩才之感。

商代的刻畫表現不少，主要有鳥、魚、蟲、蛇等，其中刻畫的最多，互成伍伍的，必須取連山二山一，繁密的內容在歌，此首歌記，也歌甘他生的歌，歌成生歌歌歌，歌歌歌歌，且可歌化为最常聽的歌，是一件歌正的歌。



Pottery and bone inscriptions of the earliest examples of Chinese writing – *jiaguwen*. (Source: Chinese History Museum 1992).



Students learn to write using templates of classical works, in this case one of the best-known Tang dynasty poems of all time: Li Bai (701-762A.D.): *“Thoughts on a Still Night”*

## PLACE SPECIFIC: Cultural differences

The standard templates are of poems, famous sayings, essays, and extracts from the classics, such as “Journey to the West”, circa 12<sup>th</sup> century A.D. about the introduction of Buddhism into China during the Tang dynasty, 7<sup>th</sup>-8<sup>th</sup> centuries A.D.

In learning the thousands of individual characters the students absorb, osmosis-like, the content of the poems, essays and stories. Thus hundreds of millions of educated Chinese both in China and around the world share the same immense store of what is called “Chinese common knowledge”. Socio-linguistics have thus been a major determinant in the continuity of Chinese civilization over centuries and many age-old values continue to be held and pursued today.

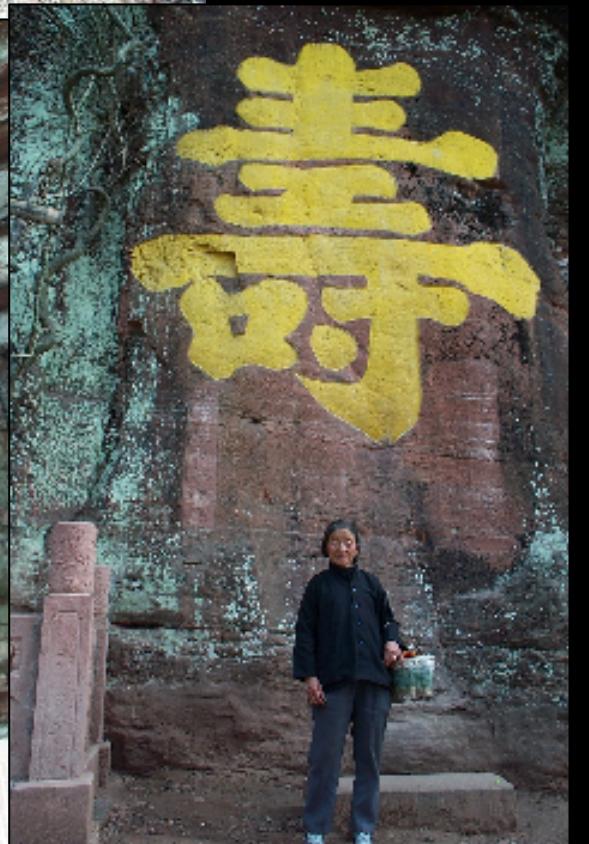
## PLACE SPECIFIC: Cultural differences

So where does this come into our consideration of western values about nature, ‘best practice’ models, World Heritage Site listing and the ‘rules’ of UNESCO?

Well, calligraphy has been utilized in natural sites all over China to capture the *tezhi* (*essence*) of a place, often through a poem (the highest form of literary art). Characters 60 metres high or more will be incised into the living rock, and when Chinese visitors read the familiar poem or saying the calligraphy immediately bridges perhaps 1200 years or more of literary history back to the original author: the past and the present are a continuum, not a distinct break as we in the west practice. Often, somebody will have very recently painted the calligraphy in high gloss red or green or yellow paint.



*Calligraphy  
adorns natural  
sites all over  
China*



## PLACE SPECIFIC: Cultural differences

Westerners will see graffiti.

They will not understand the Chinese values imbued in the calligraphy and its capture of millennia-old literary art forms.

They will fail to understand the symbolism in the colours (red for good health, yellow for prosperity, green for longevity) and see only apparent desecration of the tangible fabric of a 1000-years old rock carving.

They will fail to understand that the recent re-painting is a process that has been going on for centuries and is a manifestation of the unbroken links stretching back over centuries with the past. And when they see a new carving being etched into a rock in a wild stream they will see it as a violation of the natural values of the place.

“Listen to the water”



*Chinese tourists to a National Park will seek out human elements in the landscape for photographic records of their visit*

## PLACE SPECIFIC: Cultural differences

For the Chinese however, the calligraphy *enhances* their appreciation of the site!

How does UNESCO react? By refusing to grant WHS status because of its perception of anthropocentric embellishments that are inimical with the natural values of a site.

But are such values universal - or Eurocentric???



## PLACE SPECIFIC: Cultural differences

A fundamental difference is also apparent with the term “wilderness.” In the west this word carries connotations of pristine purity, of seductive beauty untrammeled by human presence.

But Chinese has no such word.

It has ‘*ye sheng huang jing*’ and ‘*zhi ran huang jin*’ meaning ‘countryside’ or ‘natural areas’.

The closest word is probably ‘*huang-jie*’ which means ‘badlands’ or ‘abandoned place’. Its connotations are negative. Not exactly conducive to finding common ground on what might constitute ‘best practice’ in natural environments!

## Chinese design and traditions in natural landscapes

Traditionally, China's planners would attempt to define the *tezhi* (特质) ('essence') of the landscape and then design accordingly.

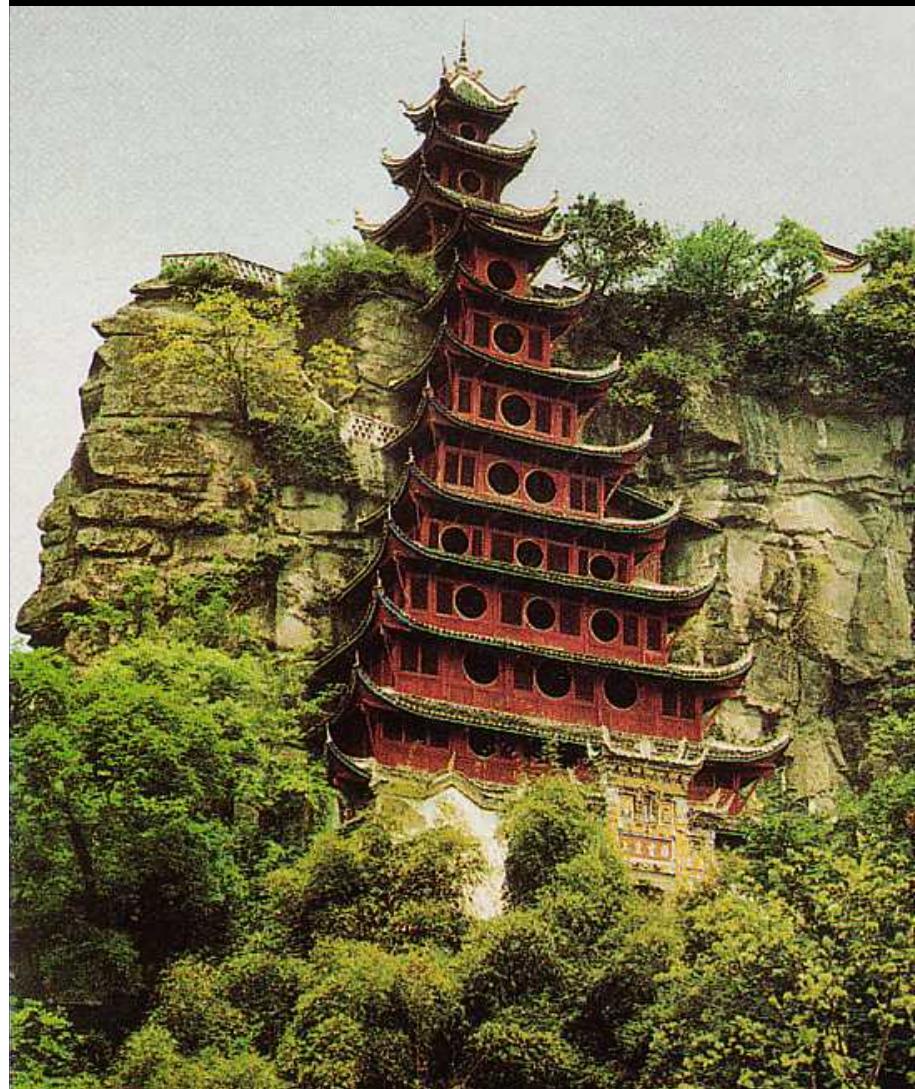
*Tezhi* connotes the unique, intrinsic or indispensable properties that serve to characterize or identify the landscape.

But they are not properties of biodiversity or of geomorphology. They are properties embedded in human feelings.



## Chinese design and traditions in natural landscapes

Thus a landscape will be identified as “imposing” 雄, or “mysterious” 奥, or “elegant” 秀, or “dangerous” 险, always in relation to the perspective of the emotions of the human onlooker .



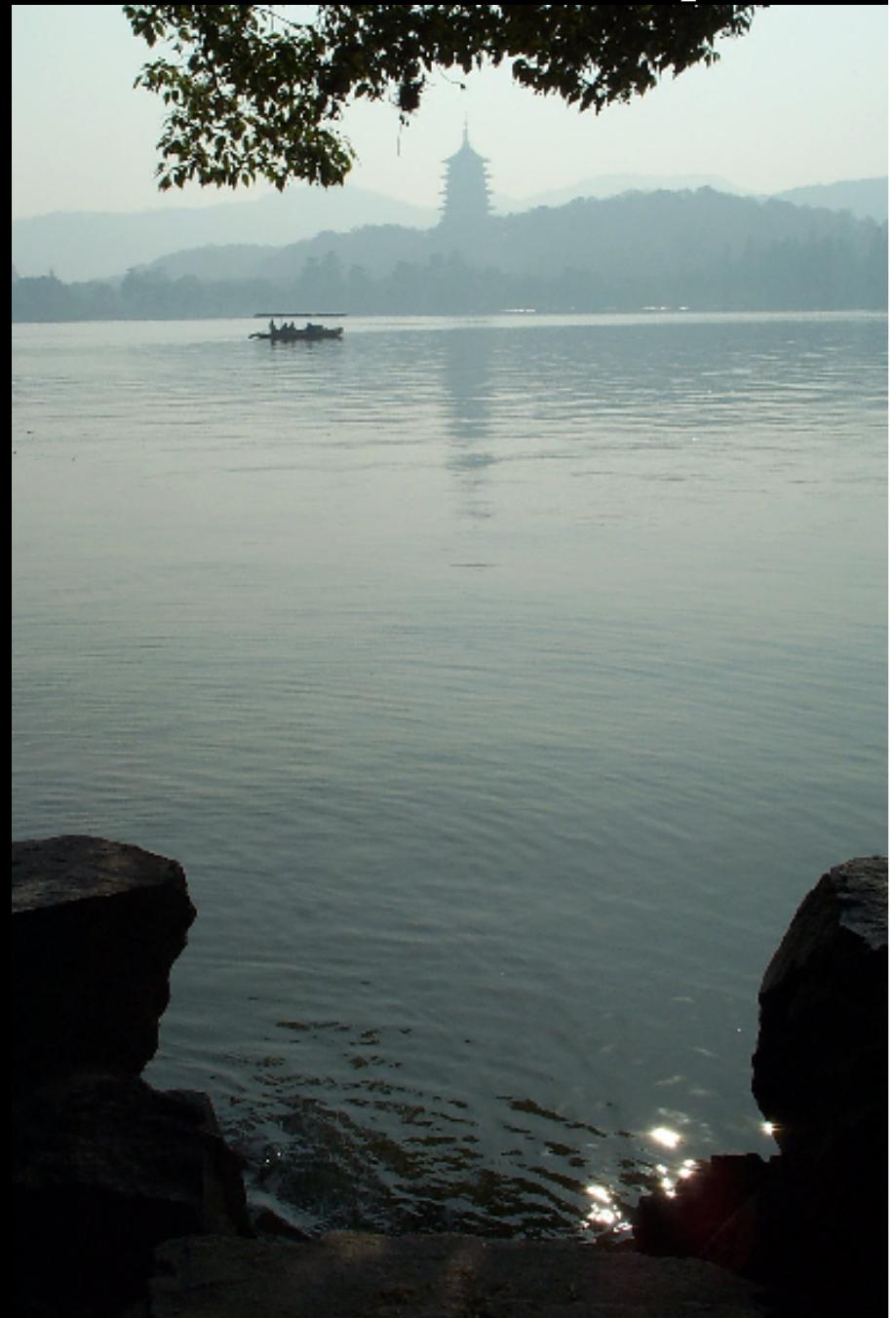
- Imperatives of design for human construction will then flow from that given identity to match the design of nature which, being imperfect, requires the addition of human-made elements for the benefit of humans.

*The tezhi of the site for Shibaoxi Temple, Wanxian County, Sichuan, is ‘imposing’, and so the building is designed to capture that essence.*

## *An understanding of Chinese design and traditions in natural landscapes*

In scenic areas famous for their ‘elegant’ image, planners will strive to design buildings that are light, simple but elegant and in proportion to the surrounding landscape. The purpose is to lead visitors to calmly appreciate the view and add a delicate interest and charm to the scenery. In low undulating areas dominated by lakes, an elegant tower (pagoda) would be placed at the ridgeline of a small hill to break the smooth gentle outline of the view. The pagoda on a low hill above West Lake, Hangzhou, is one example of 秀.

Man is not dominating nature (the western perspective) but is in harmony with nature through improving on it (the Chinese perspective).

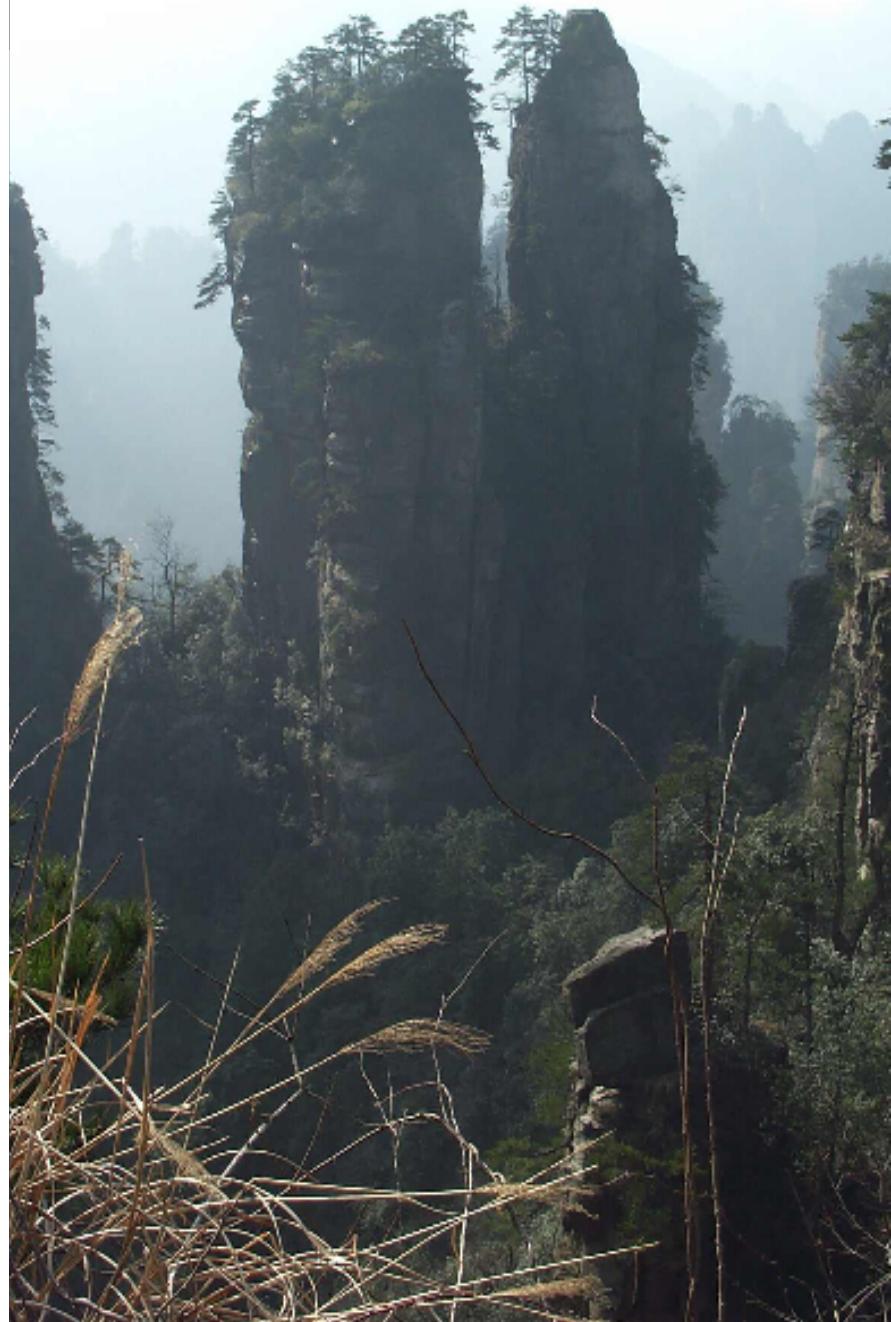


**Pavilions** were a specific factor identified by the Chinese national parks managers at the Lijiang Workshop.

- The topic came up when one of the participants suggested that Chinese park planners should not accept the western ‘best practice’ of unobtrusive shelters constructed out of local materials that are meant to blend in with the environment.
- Rather the point was that a Chinese traditional pavilion ‘speaks’. It says:

*“I am Chinese and you are in a Chinese park. I have been part of recreation in natural landscapes in China for thousands of years. My posts and my walls are inscribed with calligraphy that keep you in touch with your literary and historical heritage. I reflect the tezhi of the site: I can be small and unobtrusive or I can be tall and imposing. Do not forsake me.”*

Zhangjiajie National Nature Reserve – China's first natural World Heritage Site, 1984.



Zhangjiajie Nature Reserve, Hunan Province:

Is this pavilion out of place in the ‘wilderness’? UNESCO thinks so, but from a Chinese perspective the pagoda enhances the landscape.



Imposing! 雄



Denkushan pavilion, Guangdong.



Pavilion, Qiyunshan Daoist mountain



Yellow Crane Pavilion, Yangtze River,  
Wuhan

## PLACE SPECIFIC: Cultural differences

Caves in China are an excellent example of the immense gulf between western ‘best practice’ and Asian/Chinese values.

The west has developed a set of best practices designed to safeguard the bio-centric values of caves, coupled with ‘deep’ scientific interpretation: the geology, chemical and physical processes that have created the formations, the biology of life forms that have adapted to these specialized habitats (glow-worms, bats, blind earwigs, albino cockroaches, transparent fish, etc). Lighting is subdued, there is a general policy of look but don’t touch, and noise and flash photography is often banned. Visitation will be restricted, perhaps even banned, during periods of sensitivity (e.g. breeding season of bats).

This ‘best practice’ model for caves has become so globalized that once underground it is virtually impossible to determine what country the visitor is in.

## PLACE SPECIFIC: Cultural differences

In China caves as contemporary tourist attractions are embedded in millennia of culturally derived and culturally determined values that remain valid today.

They are cultural sites NOT natural sites

They are central features of:

- Daoist belief/philosophy;
- as Confucian power places for meditating, gaining inner strength and self-knowledge;
- as sacred sites for Buddhist worship and veneration;
- as special healing places; and
- as cultural sites reflecting classical literature, ancient poems, calligraphy (high art), and other literary values.

## Cave Interpretation in China - Daoism

- Since Daoism invokes a responsibility to bring imperfect nature into harmony with man, a common feature in many caves will be 'improvements' of the natural cave-scapes.



*Taking a broken stalactite and turning it into a fountain in a natural pool and surrounding it with a circle of white pebbles and a bracelet of twinkling red lights is an example of Man improving on Nature to bring Nature into harmony with Man. Without the stalactite fountain there is no focal point of the pool*

# Cave Interpretation in China

*Xixi-shan Cave,  
Zhaoqing,  
Guangdong  
Province*

*“1000 Poet’s corridor”*

- Caves are *dong - passage ways to Heaven - and calligraphy is a gift from Heaven, hence ‘natural’ in caves*

Calligraphy encaptures numerous elements of Chinese ‘high culture’ – classical literature and poetry, famous literature, epic events, artistic form, craftsmanship and the sacred symbolism of the origins of the Chinese script as a gift from the gods.

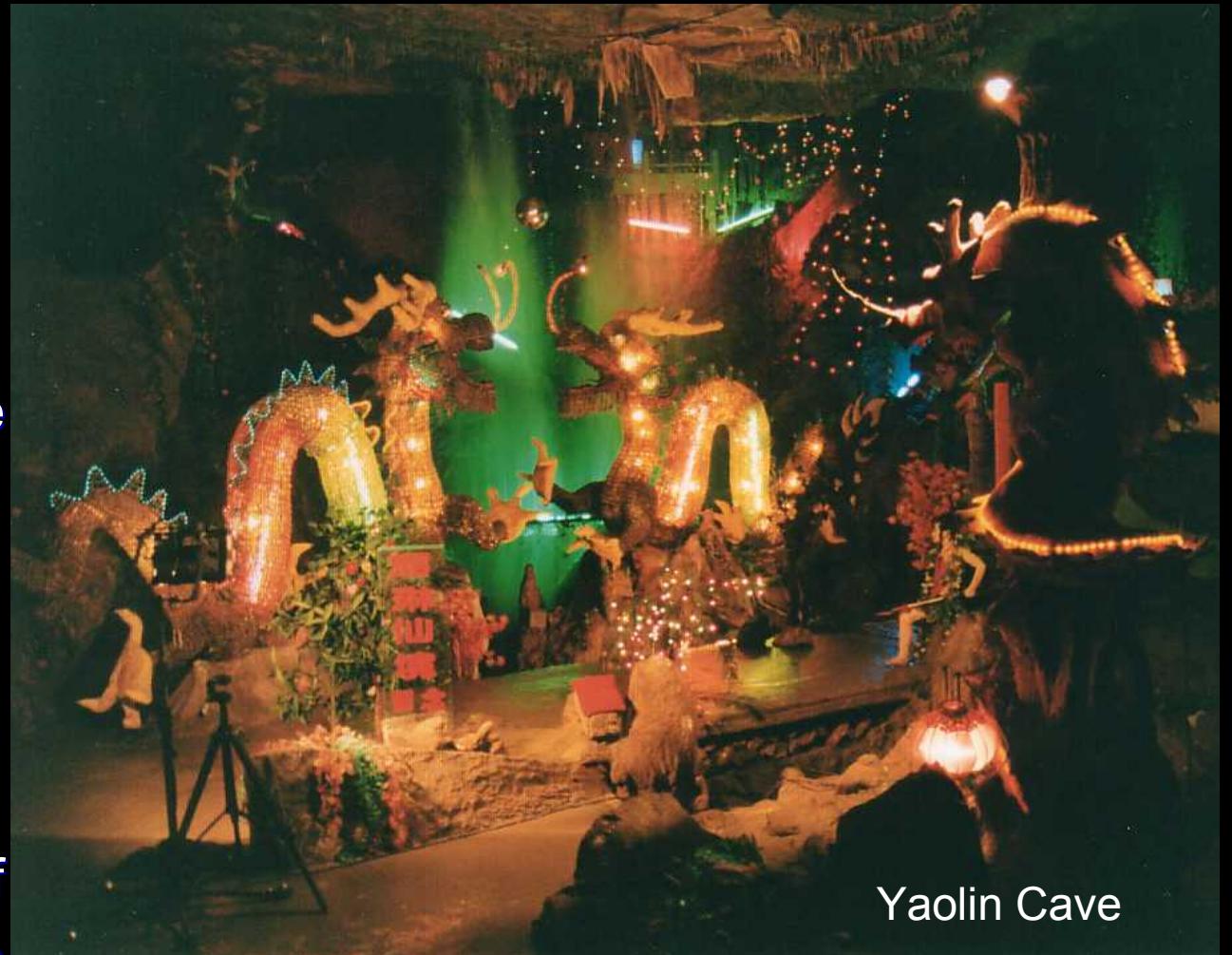
Westerners might see it as graffiti, degrading the naturalness of the site: for Chinese it enhances their experience.



In Yaolin cave, three artificial dragons about 5 metres long will be animated in a blaze of lights and roaring sounds and for 10 Yuan you can take a photo of them. For 20 Yuan you can be in the photo yourself.

This is NOT ‘Disneyfication’ but rather a deep, rich and textured symbolism, a profound expression of an ancient culture.

## Cave Interpretation in China



Yaolin Cave

## PLACE SPECIFIC: Cultural differences

- Let us return to World Heritage principles to examine another problematic aspect. Anthropologists have been regarded as having no particular role in IUCN and ICOMOS so the WHS principles tend to be heavy on tangible culture and in my experience UNESCO often has difficulty dealing with intangible culture and living people (e.g. Angkor).
- Angkor for UNESCO and most western visitors symbolizes “the romance of ruins” (McCauley, 1984), a western notion not shared by many other cultures. Angkor was re-discovered in 1824 by a Frenchman, and since then has been imbued with the notion of palaces and temples covered in jungle, a museum site to be preserved in situ (vide: Hollywood’s blockbuster, “The Tomb Raiders”)

At the height of the Khmer Empire, (8th-14th centuries) its territory was the largest empire South east Asia has known. Angkor as the capital had a million people when Paris and London had less than 30,000. After the demise of the Empire in the 15th century Angkor fell into ruin and remained largely uninhabited. The jungle slowly reasserted control.





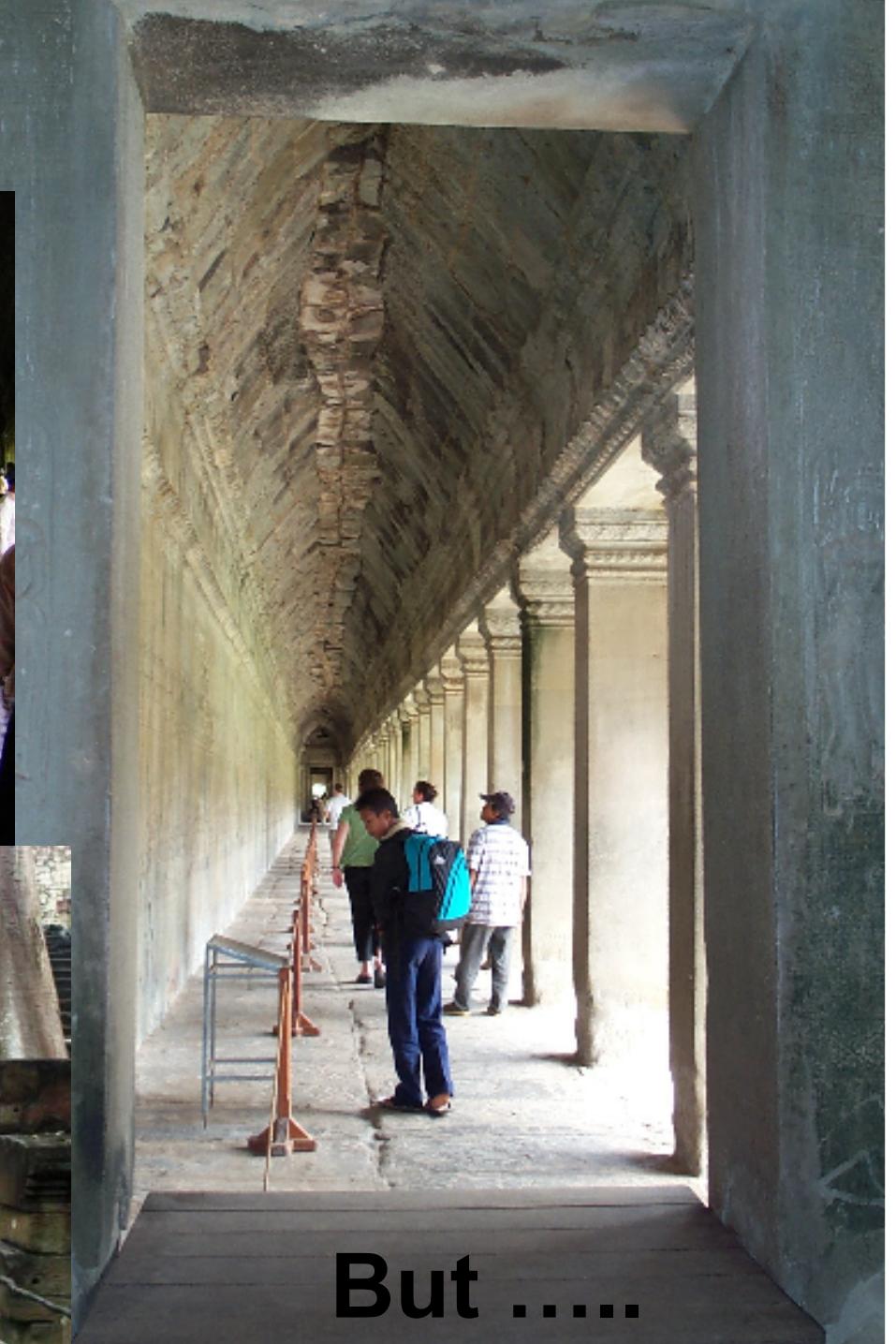
Problems of another kind have raised their head at Angkor.



Angkor in 1992: hidden in the jungle when 'discovered' by UNESCO



UNESCO's policy is "Look but don't touch." (Sound protection & conservation)



**But .....**

The revitalization of Angkor –  
120,000 villagers now live inside  
the protected area.

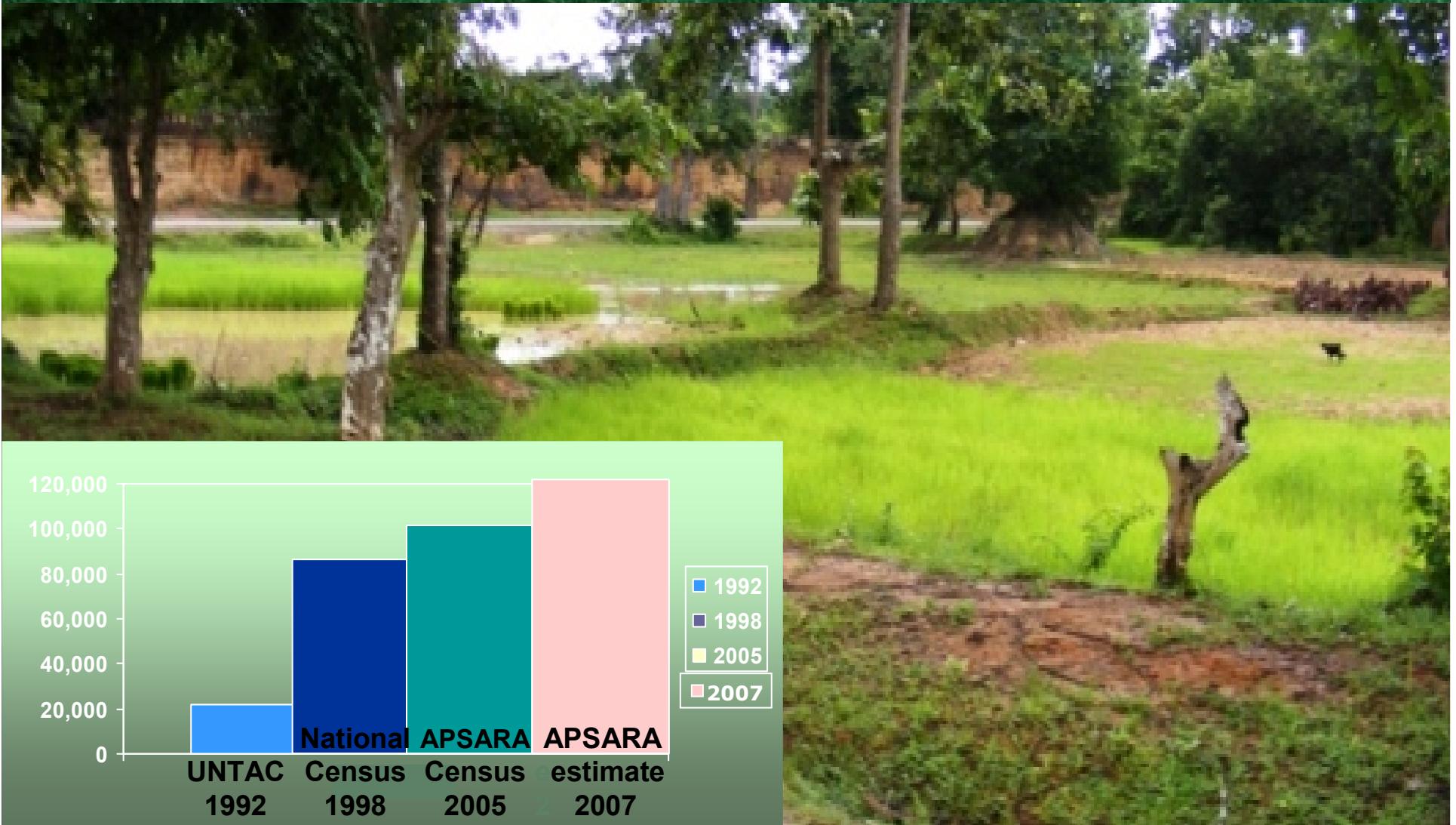


# POPULATION LIVING IN THE PROTECTED ZONES 1 & 2 (APSARA population census 2005)

5 DISTRICTS, 21 COMMUNES, 112 VILLAGES

APSARA Census 2005 : 113,000 People (18,500 Families)

APSARA estimate 2007 : 120,000+ People







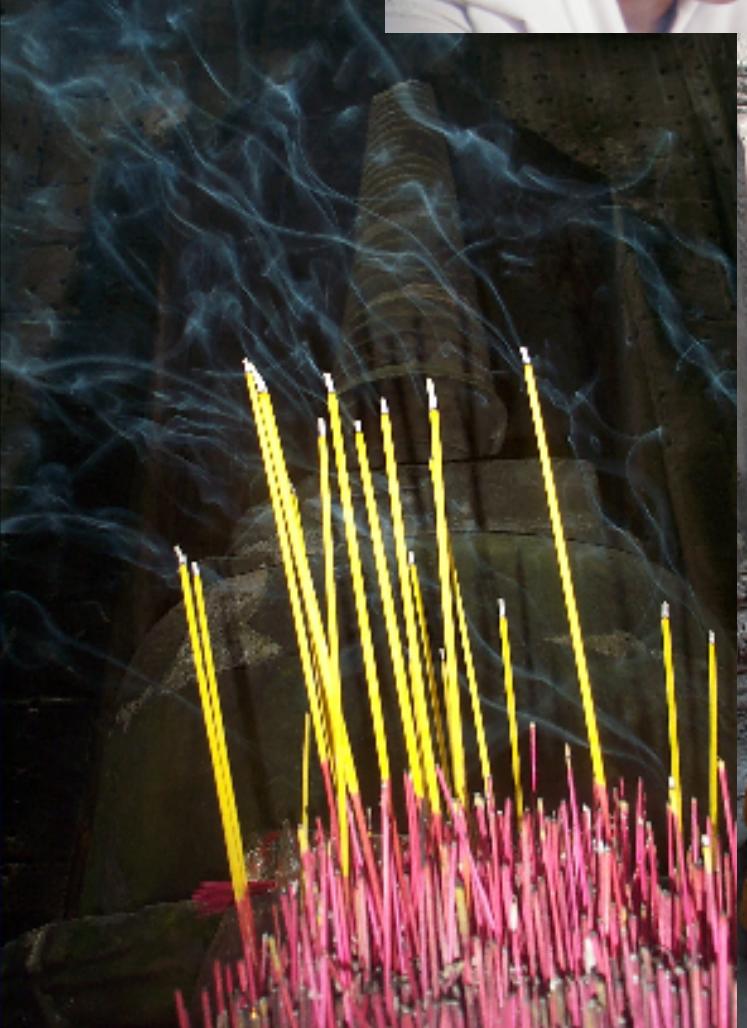
Cambodians have established about 50 Buddhist shrines within the Angkor temples, and worship now occurs on a daily basis throughout the site





## Buddhist shrines inside Angkor





A German Archaeological Conservation Project has restored the giant Buddha of Angkor Wat, and no Cambodian will now enter the temple without first praying before this statue. Many international visitors will do the same.





Cambodian pilgrims rub the foot of the giant Buddha statue for good health



This chariot wheel on an Angkor frieze resembles a Buddhist prayer wheel and it is shiny from being rubbed by thousands of devotees.



A young Japanese visitor reaches up to caress the hand of the Buddha and drape flowers over it.

A shrine was set up in the central (highest) tower of Angkor Wat



Very dangerous

## PLACE SPECIFIC: Cultural differences

- And UNESCO's response? Remove those people, lock up monuments, 'look but don't touch', or we will take away your world heritage site listing!
- UNESCO *can* deal with living people in living cities – as is the case with Bhaktapur in Nepal, and Lijiang in China. But in each instance the towns were already inhabited, not abandoned, not in ruins.
- But in the case of Angkor, UNESCO has found it very difficult to abandon its notion of 'the romance of ruins', to change its paradigm of preserving a museumized site and incorporate Khmer values about the importance of place, history, national identity and sovereignty that are all fundamental to the re-awakening of this ancient city as a *living* city in the 21<sup>st</sup> century.

## The Issue of scale

Let us turn now to the paradox of scale.

- In exploring the impacts of tourism, a key issue is the concept of scale: at what scale should tourism and its impacts be analysed?
- This is a largely neglected field of research in approaching tourism as a system, and the vast majority of tourism impact studies have been undertaken at the local, destination or site-specific scale (Hall, 2007).
- The myriad of tourism case studies almost invariably limit their focus to establishing indicators and measures of impacts within the boundaries of the case study sites.

## PLACE SPECIFIC: The Issue of scale

The UNWTO (2001) itself, with its definition of ecotourism for example supports this approach.

- Ecotourism refers to – “All forms of tourism in which the main motivation of tourists is the observation and appreciation of nature, which contributes to its conservation, and which minimizes negative impacts on the natural and socio-cultural environment *where it takes place*” (UNWTO, 2001; my emphasis ).
- UNWTO subsequently produced a handbook on “*Sustainable Development of Ecotourism: A compilation of good practices*” and it presents a selection of case studies to promote desirable standards which are all limited to the local.

## The Issue of scale

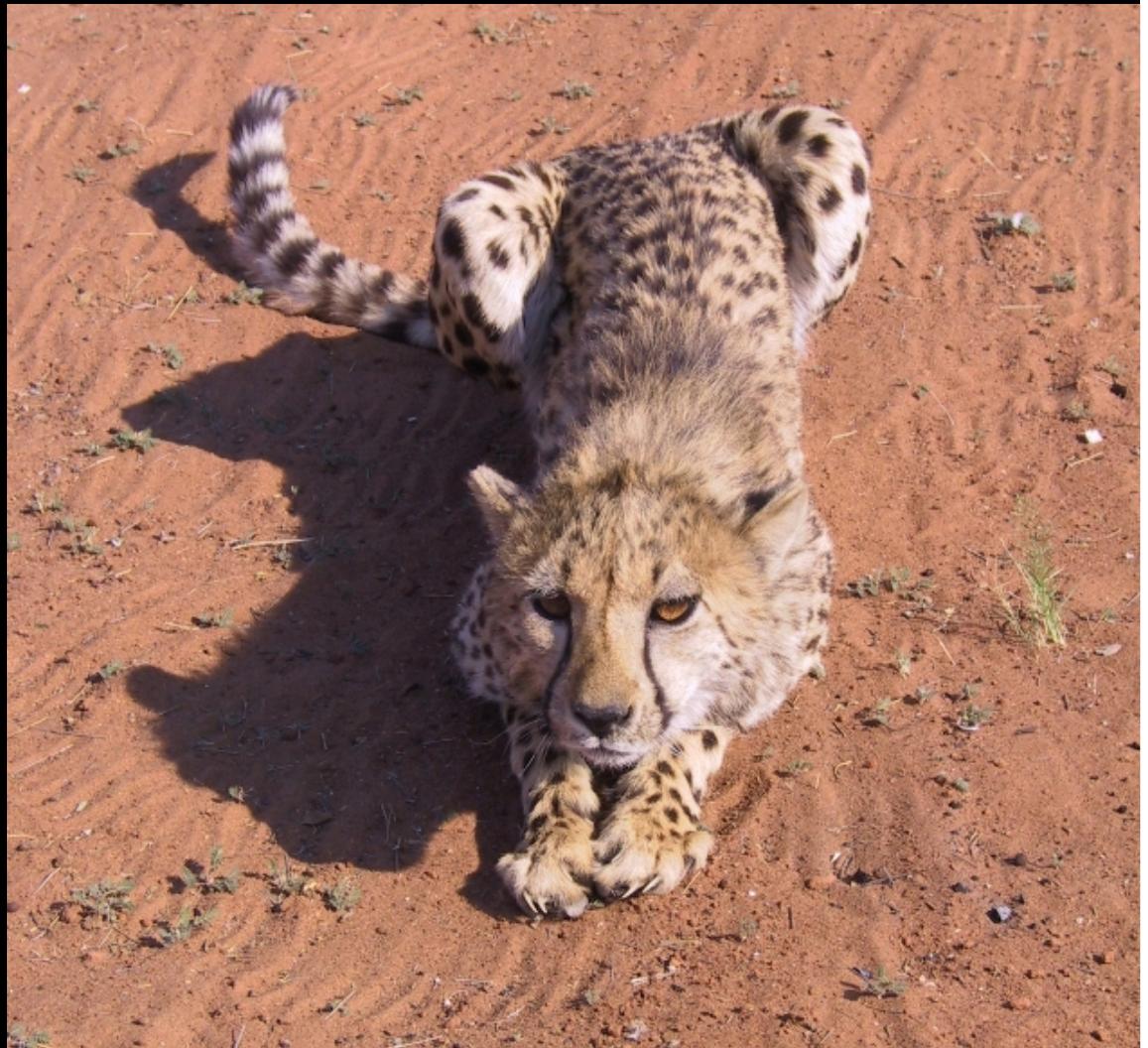
By far the majority of tourism case studies are limited not also spatially but are time-specific. The results are most often “snapshots” which fail to reveal ongoing processes and the **cumulative** effects of many visitors over long periods of time.

- One of the paradoxes of tourism is that the individual visitor's stay will be short and individual activities and behaviour, often self-centred and inappropriate (eg interrupting courting lions to get a close-up photograph) will appear to the individual to have no lasting impact.



## The Issue of scale

- But just as one drop of water cannot be held accountable for a flood, millions of drops of water create that flood.
- In the same way, an individual tourist who seeks to get as close to animals as possible for ‘the experience’ cannot be held accountable for the cumulative impact of many such actions over an extended period of time.
- Total tourism visitation is indeed responsible!



## The Issue of scale

The cumulative impact of dolphin watching ecotourism, Kaikoura, New Zealand.



© whale-images.com

Recruitment of young has dropped by 50% (interference with breeding); total numbers have been reduced by 40%, and more than 60% reveal scarring from collisions with boats.



© whale-images.com (Photos: whale-images.com)

## Managing the Impacts of Tourism

- When dealing with the impact of tourism at the local or destination scale, a range of sound management tools based on voluminous research have been developed.
- These include such concepts as carrying capacity, LAC (Limits of Acceptable Change), VERP (Visitor Experience & Resource Protection, favoured by the USA Parks Service), VAMP (Visitor Activities Management Process, favoured by Parks Canada) and TOMM (Tourism Optimization Management Model (Australia)).
- While such management tools may achieve sound conservation outcomes that are sustainable at the local level, the focus of attention remains on the site, or the destination.



## Putting Travel back into Tourism

In all of these approaches, the fact remains that they have removed **the travel** from the tourism, or what Hall (2007) has termed the need to take into account the effects of **tourism mobility** from source regions through transit zones to the destination.

- The impacts of “getting there” and once there, the contribution of travel to pollution and environmental degradation, the “getting around” at the destination, are overlooked.



## Putting Travel back into Tourism

This emphasis on the **local** biophysical and socio-economic impacts ignores **macro**-environmental issues and **global** effects such as burning transport fuels that produce greenhouse gas (GHG) emissions.

- Such anthropogenic emissions of GHG (particularly CO<sub>2</sub>) add to the greenhouse effect which in turns leads to climate change, which in turn impacts on specific sites and destinations.
- Many of these places, especially in terms of ecotourism, will be located in fragile environments such as islands, alpine regions); but all changes in the climate system pose significant challenges for tourism.

(Beckens and Schellhorn, 2007).



## Putting Travel back into Tourism

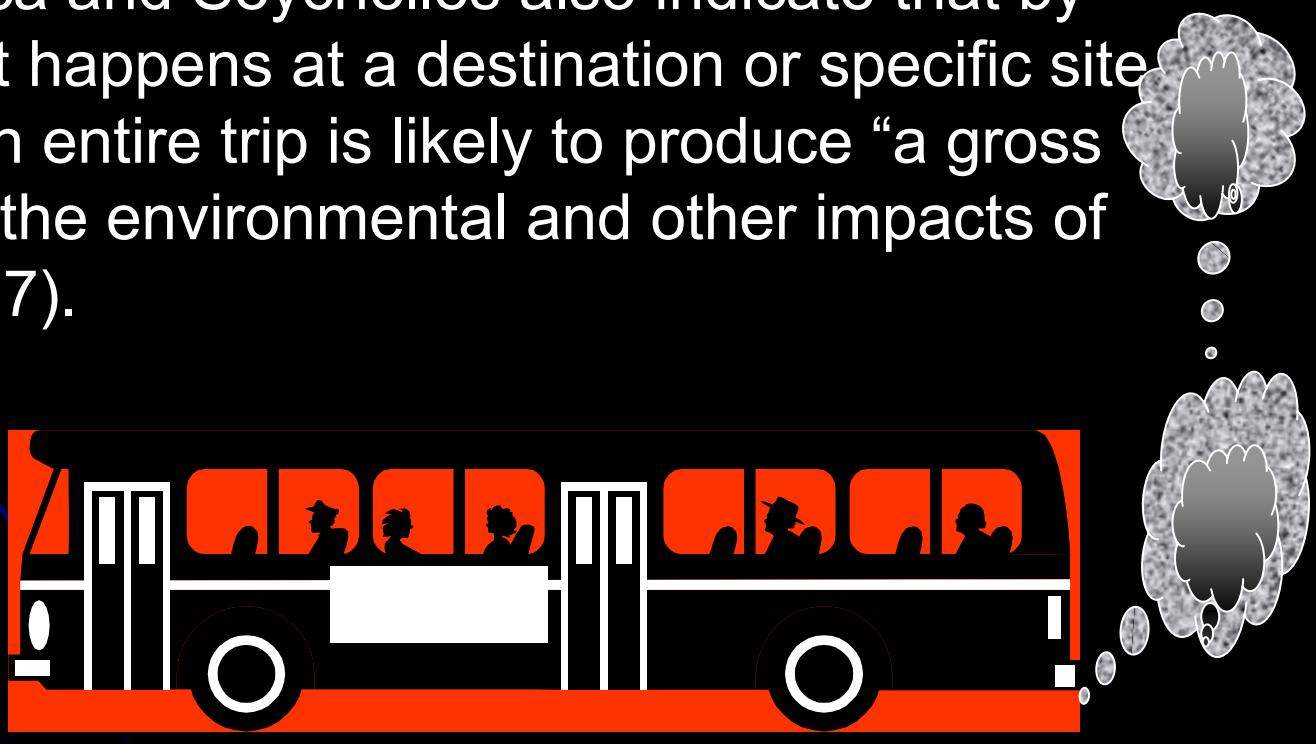
A growing number of researchers suggest this is critical for ecotourism. Becken (2003, 2007), Gossling, (2007), Hall (2007) and Higham & Luck (2007) for example, all consider that with respect to long distance tourism, a typical journey by jet aircraft can make up as much as 90% of the tourist's contribution to emissions and climate change.

A recent study that has surprised the New Zealand Government and its efforts to meet Kyoto Treaty reductions in emissions and pollution is the indication that its much vaunted tourism industry is possibly the single greatest contributor to that failure once the total impact of all tourist-related travel and energy consumption is taken into account (Becken & Simmons, 2006).



## Putting Travel back into Tourism

Their research demonstrates that more than 90% of total energy use by the 3 million international tourists who arrived in New Zealand in 2006 can be attributed to travel. And once at the destination tourism-related internal transport for both international and domestic touring accounts for 69% of total tourist energy use. Other studies from Switzerland, Belize, Norway, Costa Rica and Seychelles also indicate that by studying only what happens at a destination or specific site rather than over an entire trip is likely to produce “a gross underestimate” of the environmental and other impacts of tourism (Hall , 2007).



## The Paradox for Ecotourism

The paradox for ecotourism is that many such sites and attractions are in peripheral or pristine areas since such isolated locations are often a key factor in their current level of biodiversity, hence their attraction.

- Higham and Luck (2007) have termed this “the paradox of low-impact and long haul travel” in which the jet aircraft as the most commonly used mode of transport is also the least environmentally friendly form of travel and that it contributes significantly to global warming. One example is that one tourist’s return travel journey by wide-bodied jet from London to Costa Rica will ‘produce’ about 2.5 tonnes of CO<sub>2</sub> while the per capita emissions of CO<sub>2</sub> in Costa Rica amounts to only 1.2 tonnes in a whole year.



## The Paradox for Ecotourism

This examples highlights the unequal nature of First World-Third World tourism travel and the paradox of the ‘eco’ label (Becken 2007).

- Hall (2007) notes that the long haul travel of much ecotourism may have a resultant carbon footprint far greater than many mass tourism destinations.



## The Paradox for Ecotourism

- This is a startling claim and completely at odds with our hitherto comfortable belief that ecotourism is ‘clean, green and sustainable.’
- In this context a broader analysis of the environmental impact of such ecotourism may indicate that there is a nett negative impact with reference to the environment, even if at the local or site specific level it often is indeed a ‘good’ and responsible and sustainable form of development.



## The Paradox for Ecotourism

Gossling (2002) takes this argument to a logical if unpalatable conclusion:-

That from a global sustainability and equity perspective, air travel for leisure from an ecological perspective should be actively discouraged.



## The Paradox for Ecotourism

Such an open-systems approach and the link to global issues challenges the widely accepted conceptual link between ecotourism and nature conservation.

- It presents a challenge to the stance of a number of organizations which invariably present tourism as making a contribution to the environment through conservation and protection of habitats, ecosystems and landscapes with their biodiversity.
- Ecotourism can and does make such a contribution in many places: but the most recent research indicates that the whole picture of impacts and effects has not been fully unveiled.



## Climate Change and Tourism

Tourism and travel in all their many manifestations contribute to global warming and climate change.

- Climate change has the capacity to alter significantly the abiotic— and therefore the biotic – factors in ecosystems, push species outside their tolerance level, and thus in a circular fashion impact directly on those tourism ventures and activities that depend upon those ecosystems in their present state.
- For example, global warming will increase ocean temperatures (an abiotic factor) which will result in coral bleaching, the destruction of diverse marine habitats, (biotic impacts), & the potential end of scuba dive tourism, some recreational fishing and other current forms of coastal tourism in tropical areas (impact of climate change ON tourism).



## The Challenges for Tourism

- In many ways the challenges that tourism faces in terms of its impacts and potential for contribution to climate change are not unique.
- One of the immediate challenges is for tourism researchers to move beyond the localised, destination-oriented case study approach to an open-systems focus if the full impacts of tourism are to be recognised.
- Until that approach becomes more widely adopted, the issues remain incompletely understood and so potential solutions may also remain un-revealed.

## NON-LINEARITY

SESs are in the main, not amenable to analysis by existing *linear, cause and effect science* - rather by *nonlinear science*. Existing models (models from management, economics, orthodox or *normal science* ) are not effective.

When we observe effects that are out of proportion to the known cause (based on normal science) we may need to seek answers in nonlinearity to explain the unexpected results.

There are frequently:-

multiple causes;

cascading effects perhaps lasting decades –

all working on different time and spatial scales;

legacy effects from actions taken well in the past; and  
feedbacks of various types.

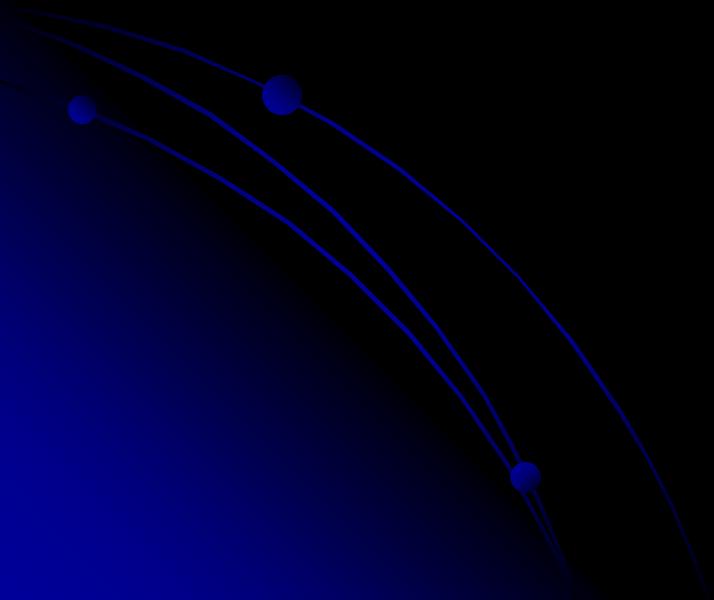
Unfortunately we have as yet only a small growing number of nonlinear models – and none specifically designed to help us understand tourism's fragility and resilience.

## Carrying capacity

Earlier I mentioned that we need to re-examine visitor management and monitoring methodologies.

One of these methods is carrying capacity.

It has been convincingly negated as a useful or valid paradigm for protecting and conserving the environment from tourism, yet it still constantly appears in Tourism Master Plans and destination ten year plans, etc.



## **Visitor Impact Management Models**

### **TOURISM CARRYING CAPACITY**

- Most of the original work on carrying capacity focused on describing the ecological and social impacts of recreation (e.g. soil compaction, vegetation loss, crowding and loss of solitude), and trying to establish relationships between the level of use and the level of impact.
- But establishing causative correlations has proved to be a difficult task and carrying capacity has now been discarded by many managers (eg the US Parks & Wildlife Service).

## CARRYING CAPACITY

- For example, in terms of social impacts, if we have different nationalities at a site together, their perceptions of crowding will be very different. This is because we have different ideas about personal space conditioned by social and cultural values (social crowding – which is not necessarily physical crowding) .
- For example, one American will feel comfortable in the same space where four Shanghainese may be quite uncomfortable. If the American feels jammed up with too many people then his/her sense of enjoyment is decreased and irritability becomes the dominant sentiment.

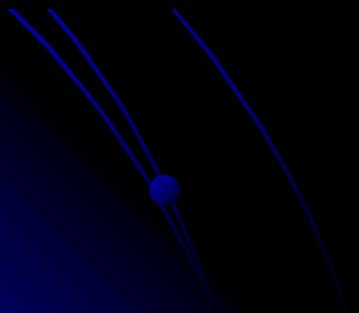
## SHANGHAI SWIMMING POOL

Crowds may add essential atmosphere, although western visitors would find this crowd level unacceptable and destructive of enjoyment



## CARRYING CAPACITY

- If we have ten different nationalities at the same site together we may have ten different responses to the amount of personal space that is necessary for an enjoyable experience. But how do we determine which is what? How many square feet of viewing space do we provide at a lookout? How do we restrict the number of people at the lookout at any given time if we do not stop each individual and find out how much personal space they need?
- You can see that **there is no carrying capacity formula that will be satisfactory.**



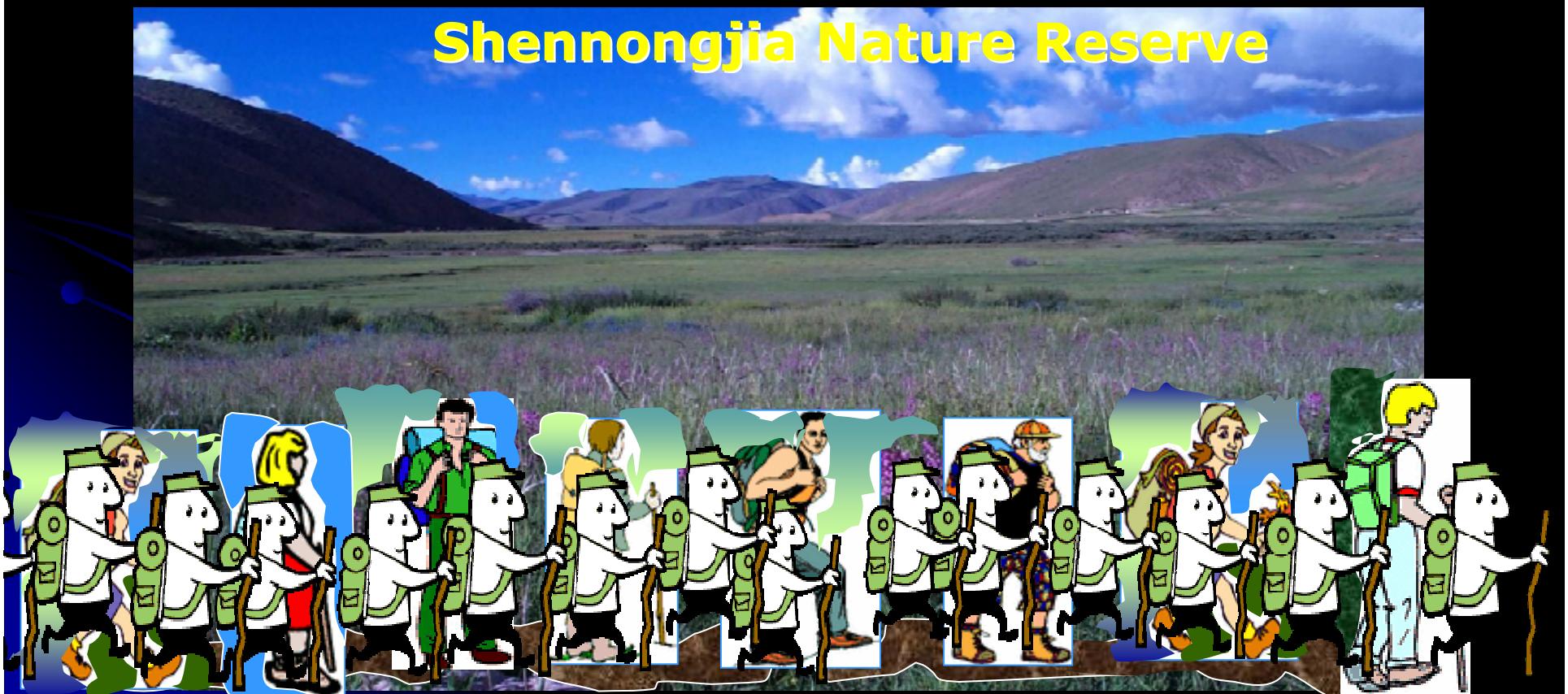
## **Shennongjia Nature Reserve – provides a good example of illustrating variable impacts of a constant number.**

- In winter, 1000 visitors crossing a field when the ground is frozen and there is no grass or flowers will not damage the vegetation. Its carrying capacity is limited only by the amount of space available.



In summer, 100 visitors could cause extensive damage to the alpine vegetation by trampling flowers and destroying seeds for the next generation of plants. But if they are biologists sensitive to possible damage, perhaps 200 could cross the same field and cause less damage than 10 city people who have never been in the countryside before. What is the carrying capacity? 10? 20? 100? 200? 1000? There is no single answer.

## Shennongjia Nature Reserve



## Shennongjia Naure Reserve

5 Butterfly collectors may cause huge damage



## Shennongjia Naure Reserve

100 'consumptive activity' visitors would cause massive damage



Here, 12 people jumped out a mini-bus and in five minutes picked hundreds of wildflowers!

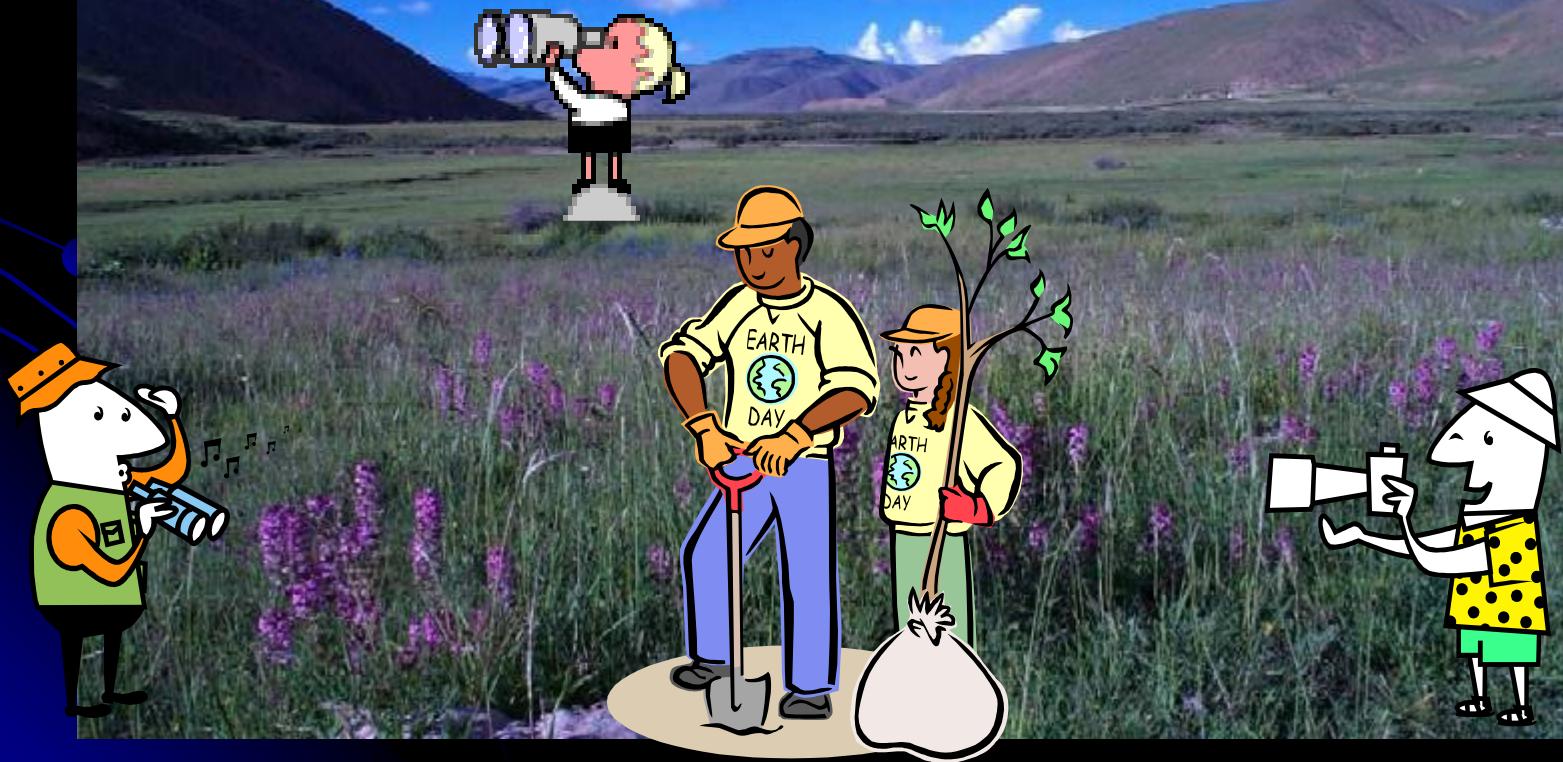


Different users carrying out different activities will all have varying impacts.

E.g. 100 Birdwatchers and photographers are benign.

100 tree-planting visitors will make a positive contribution to rehabilitate a degraded site.

Conclusion : There is no single carrying capacity number



## Visitation targets

Visitation **targets** are often confused with carrying capacity.

You may see a development plan that says:

### **Carrying capacity.**

*"It is forecast that the Park will receive 250,000 visitors in Year One, rising to 1 million visitors by Year Five."*

Or:

"As development is continued, the objective is to increase visitors to 12,000 per day in peak periods."

Neither of these statements relates the numbers to the capacity of the resource to absorb the impact of such visitation. They are **targets** that Management may want because of income rather than because of any concerns about limiting tourists in order to sustain the environment. In an ideal world it may be management adopting the cautionary principle and limiting numbers until a better comprehension of all the impacts is obtained; but this is not in my experience common.



## LIMITS OF ACCEPTABLE CHANGE (LAC)

- Because of the shortcomings of carrying capacity, management intervention saw a shift in focus from trying to find the ‘magic number’ of users (*inputs*) to looking at acceptable changes in the environment or recreation experience (*outputs*).
- The LAC process needs to be applied in the context of explicit management objectives to achieve desired standards of social and resource conditions.
- It is **the condition of the area, not the number of users**, that is the primary focus of attention, and depending upon how those conditions can be attained and maintained it may or may not involve making decisions about reducing recreational use.

## LIMITS OF ACCEPTABLE CHANGE (LAC)

There are four major components to the LAC process

- the specification of acceptable and achievable resource and social conditions, defined by a series of measurable parameters;
- an analysis of the relationship between existing conditions and those judged acceptable;
- identification of management actions judged to best achieve the desired conditions; and
- a program of monitoring and evaluating management effectiveness.

The LAC has largely replaced carrying capacity in many national parks and other natural destinations.

# Visitation targets

## Sustainable Tourism: Getting the Balance Right

The fundamental equation is simple:

**Conservation** of the resource takes priority over other considerations:

No Conservation = no natural resource = no attraction = no tourism.



## **Summary: The Challenges for Tourism**

We need to be adventurous and begin to question, perhaps more rigorously than we have in the past, some of our existing paradigms:

- our paradigms of what constitutes adequate education for tourism;
- our paradigms of tourism as an industry and business activity rather than as a coupled social-ecological system;
- our paradigm for community based tourism and poverty alleviation to embrace a much wider platform of and for intervention, especially by utilizing supply chain and value chain analyses;

## The Challenges for Tourism

- our paradigms of ‘best practice’ and optimum conditions, and
- whether some of our operating principles are Eurocentric and not truly universal;
- the need to move beyond site specific assessments to broader scales that put travel back into the pollution equation and challenge the notion of ecotourism as a clean green sector of tourism;
- to discard the shibboleth of carrying capacity;
- and to get stuck into formulating non-linear models to produce greater understanding of the multiplicity of tourism’s complex problematics and how best to tackle them.

## The Challenges for Tourism

The challenge for the tourism industry and operators is to reduce impacts and the environmental costs associated with incomplete or insufficient remedial action ...

... while for researchers it is to broaden the scope of assessment and analysis from the local to the global, from single discipline to multi-disciplinary systems analysis.

- It is to accept that tourism, and ecotourism in particular, are rife with paradoxes and that until these paradoxes are adequately addressed the capacity of tourism to make a greater contribution to resilience and sustainability in developing countries – and indeed all countries – will not reach its full potential.

END