

Augmenting the Geotourism Experience through New Digital Technologies

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Augmented Reality (AR) adds digital elements to a live view often by using the camera on a smartphone an interactive experience of a real-world environment where the objects that reside in the real world are enhanced by computer-generated perceptual information.



**National Geotourism Strategy Goal # 1 -
Content using new digital technologies**



Virtual reality (VR) implies a complete immersion experience that shuts out the physical world.

National Geotourism Strategy Goal # 7-Training of geologists to improve communication skills for geosite interpretation.





<https://www.projectlive.org.au/wicked-witchelina>

Augmented Reality and Immersive Virtual Environments (AR®IVE) in SA

Wicked Witchelina Geotours

Famous for its rock formations dating from the birth of complex life on Planet Earth, Witchelina is a 421,000 ha nature reserve in the Willouran Ranges acquired by Nature Foundation SA in 2010.

National Geotourism Strategy Goal # 1 - content developed with new digital technologies

Ecotourism & Geotourism

Ecotourism is practised predominantly in protected areas such as national parks whereas geotourism is undertaken also in all areas where primary industry activities are being carried out.

Geotourism is increasingly seen globally as an instrument of regional economic development.



GEOPARK RINJANI LOMBOK

Memuliakan Warisan Bumi Dan Mensejahterakan Masyarakat

National Geotourism Strategy Goal # 6 - Geotourism to strengthen Australia's international geoscience standing.

Geotourism

- NOT Geological Tourism or Tourism for Geologists,
- “tourism surrounding geological or landscape attractions & destinations”
- Holistic - abc
- Is (was?) booming globally being a key driver for tourism, esp. Europe and Asia



- Abiotic - sky, climate & geology, landscape and landforms - GEODIVERSITY
- Biotic - living fauna (animals) and flora (plants) - BIODIVERSITY
- Cultural - past & present, indigenous & post European HUMAN DIVERSITY

Australian Geoscience Council

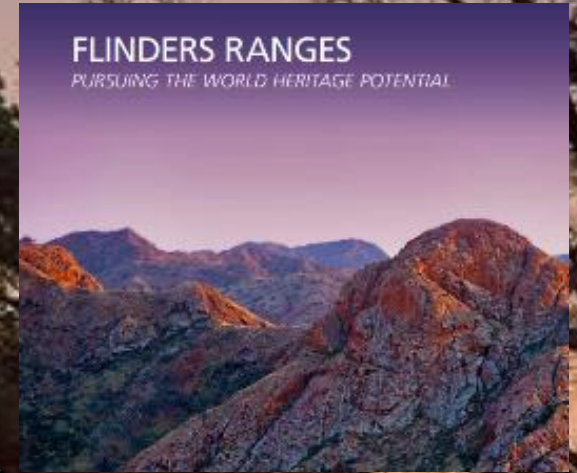


The Australian Geoscience Council (AGC), the peak Council of geoscientists in Australia is developing a National Geotourism Strategy for major geotourism projects and activities in Australia

See following presentation by Angus M Robinson –
“Developing a National Geotourism Strategy for Australia”



National Geotourism Strategy - 7 Strategic Goals



1. Geotourism content development using new digital technologies
2. Approval pathways for major geotourism projects
3. Creating high quality sustainable geotrails
4. National geoheritage listings for geotourism
5. Geotourism as a key driver for celebrating mining heritage
6. Geotourism to strengthen Australia's international geoscience standing
7. Training of professionals to improve communication skills for geosite interpretation



National Geotourism Strategy -Goal #1 - Content



Geotourism celebrating Geodiversity:

By expansion of the Geotourism map concept (as developed in NSW) progressively across Australia on a 'state by state' basis (both hard copy and online) supplemented by publications.

This map shows a range of 96 sites in NSW which are geological wonders, museums or tours.

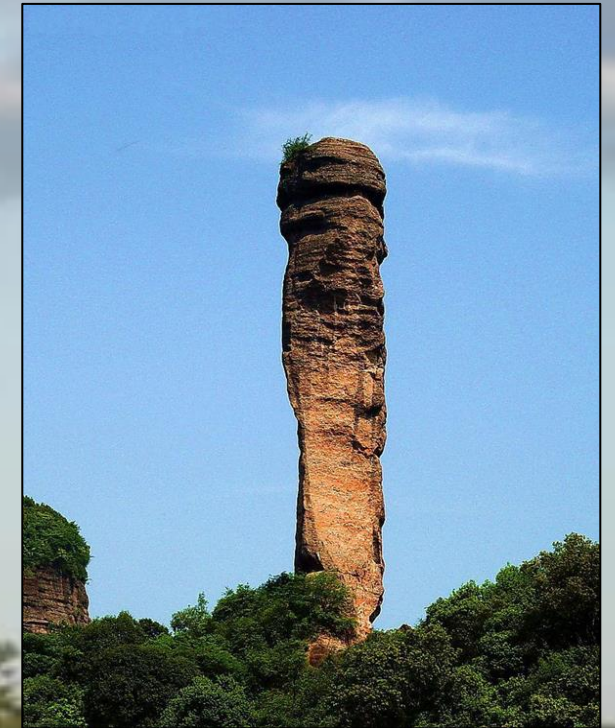
There are short descriptions of the geology with map references and location flags on the map so the sites can be easily found.
Size 100cm x 70cm.

National Geotourism Strategy Goal # 4 New Geotrail development.

Danxiashan - DJI (Da-Jiang Innovations) joint project in drone application park management & environmental management

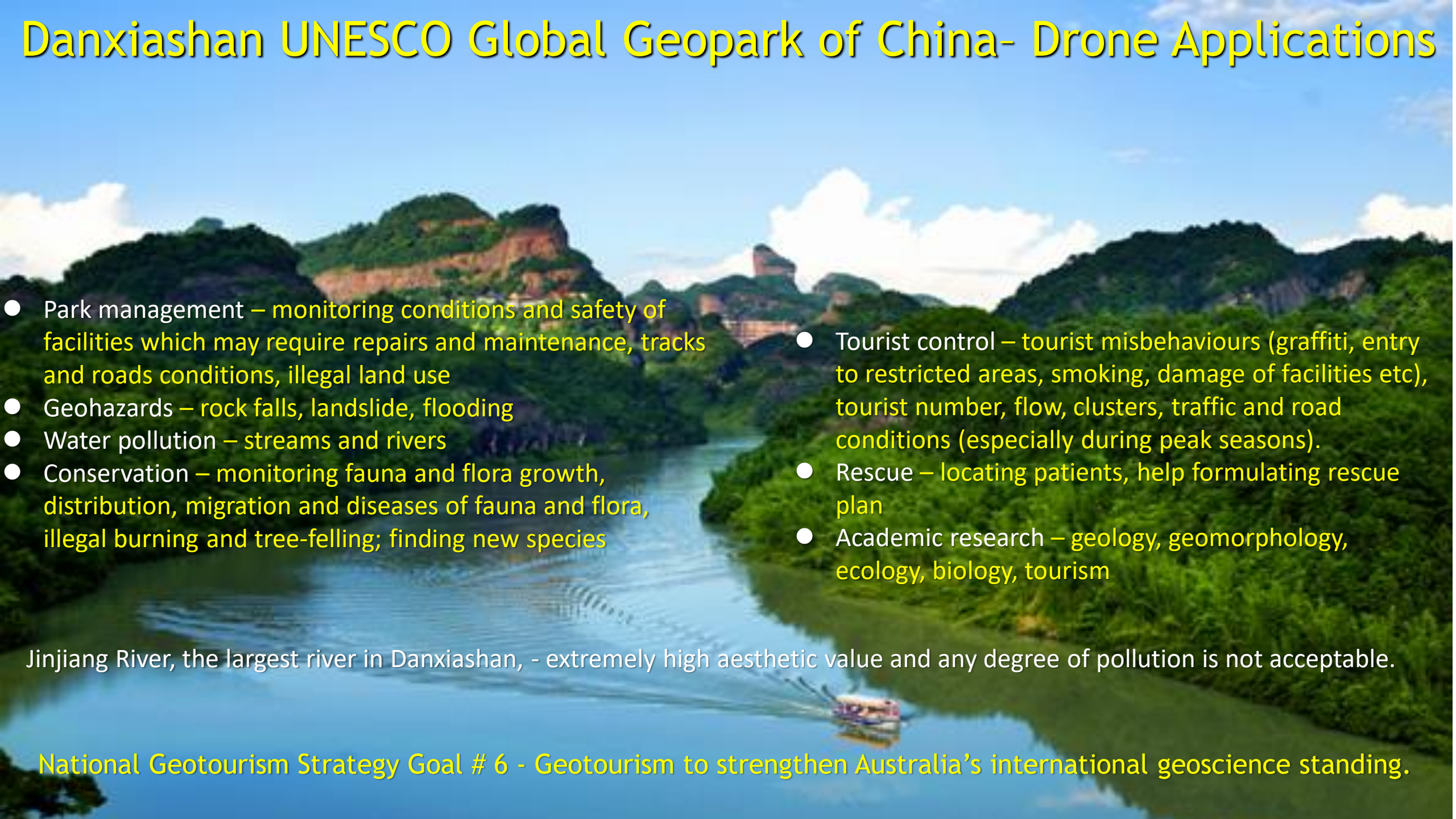
- since 2016 (DJI- world's largest drone manufacturer).
- Continual technical support and advice from DJI drone engineers
- 10 sets of DJI model Phantom 3 and 4 are ready for use 24/7 (max height 750 m high, flying range 5km, speed 45 km/hr)
- 8 fully licensed staff received DJI's theoretical and practical training.

Lazhufeng Peak (Candle Rock) is one of the closely monitored sites among the 40 sites of potential geohazard (Category III)



National Geotourism Strategy Goal # 1 content developed with new digital technologies

Danxiashan UNESCO Global Geopark of China- Drone Applications

- 
- Park management – monitoring conditions and safety of facilities which may require repairs and maintenance, tracks and roads conditions, illegal land use
 - Geohazards – rock falls, landslide, flooding
 - Water pollution – streams and rivers
 - Conservation – monitoring fauna and flora growth, distribution, migration and diseases of fauna and flora, illegal burning and tree-felling; finding new species
 - Tourist control – tourist misbehaviours (graffiti, entry to restricted areas, smoking, damage of facilities etc), tourist number, flow, clusters, traffic and road conditions (especially during peak seasons).
 - Rescue – locating patients, help formulating rescue plan
 - Academic research – geology, geomorphology, ecology, biology, tourism

Jinjiang River, the largest river in Danxiashan, - extremely high aesthetic value and any degree of pollution is not acceptable.

National Geotourism Strategy Goal # 6 - Geotourism to strengthen Australia's international geoscience standing.



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Wild and Wicked Witchelina, Willouran Ranges, SA



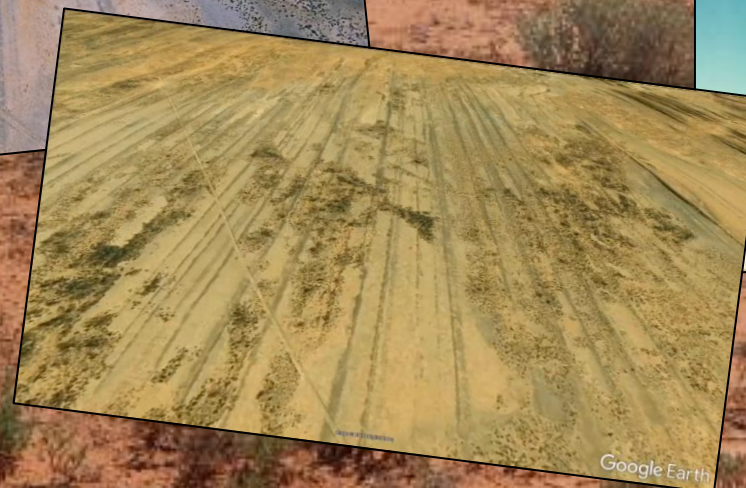
NGS Goal#1 - Use new ICTs (e.g. smartphones, 3D visualisation, 360 panoramas, drones, AR & VR), & GIS technologies as a cost-effective means of accessing and better communicating geological content for travellers and residents in regional Australia.



Dunes & Wildflower Nature Drive

Virtual Reality Geotour
ProjectLIVE.org.au

"AN AUSTRALIAN FIRST"



Langkawi is “- a single unified geographical area where sites and landscapes of international geological significance are managed with a holistic concept of protection, education and sustainable development”



THANK YOU

National Geotourism Strategy Goal # 6 - Geotourism to strengthen Australia's international geoscience standing