

Beyond GIS: Trying to make sense of cultural landscapes on Penghu Archipelago, Taiwan

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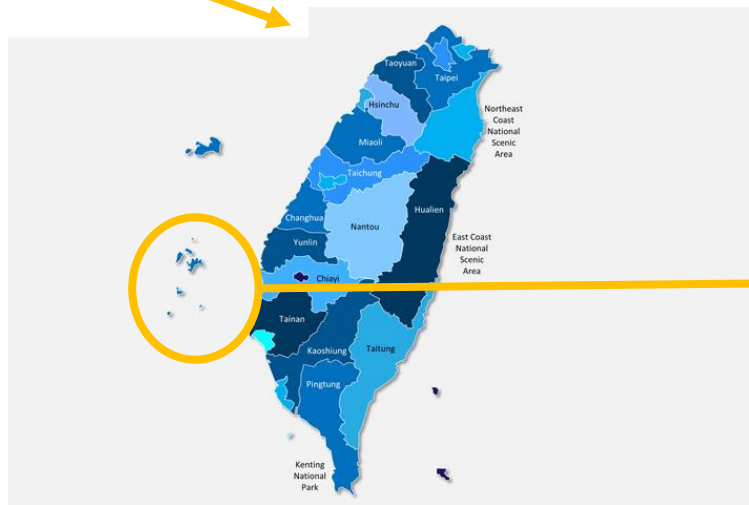
Institute of Geography, University of Hamburg, Germany

What Is Cultural Landscapes?

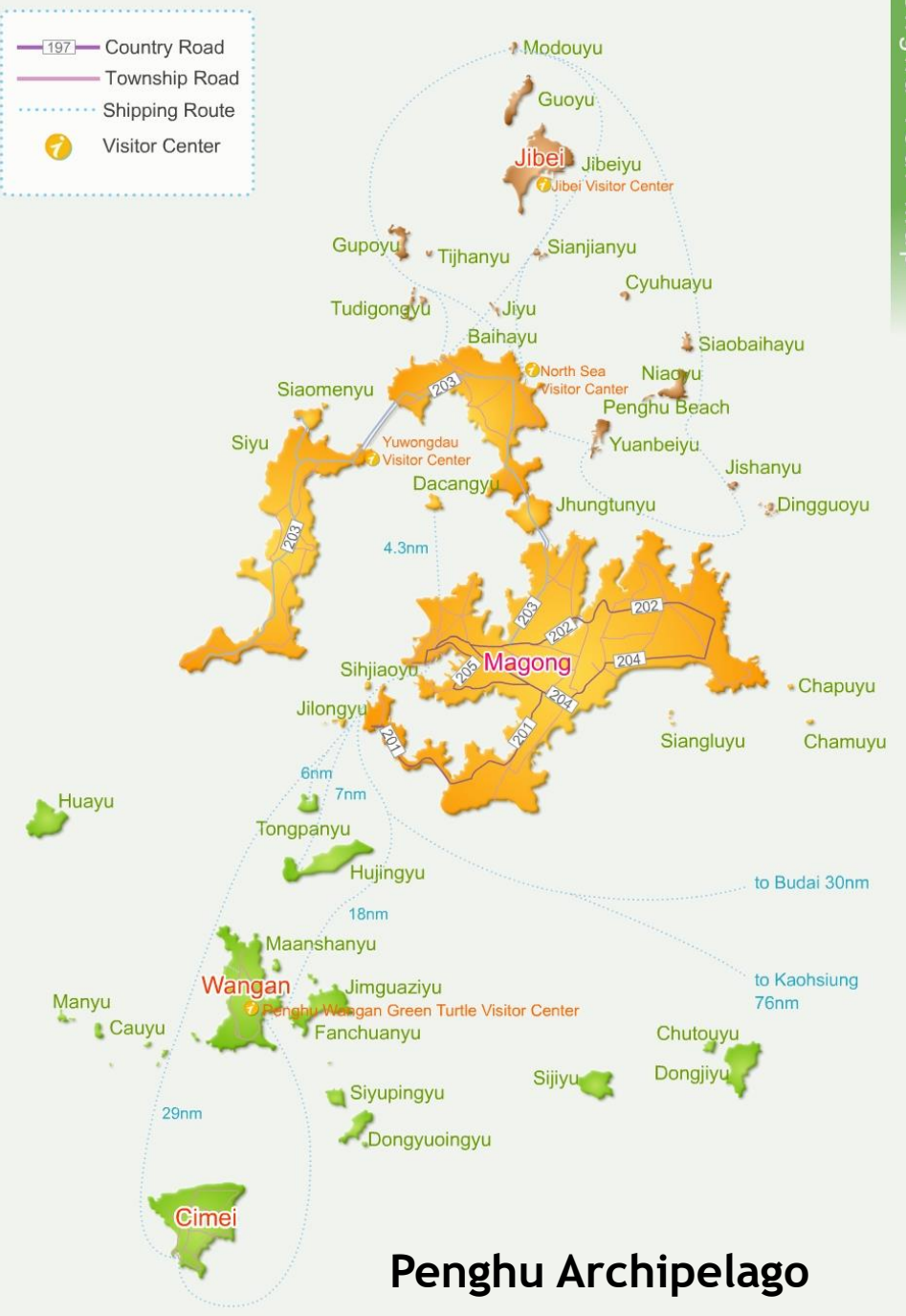
- We define cultural landscapes as landscapes created or modified by human societies, as landscapes of historical or archaeological importance, or as landscapes chosen or not to serve an economic, spiritual, sanctuary, commemorative or other cultural function. (by our Panel members)
- These landscapes are, due to their uniqueness, size, internal variation, lack of comparability, and the process of continuous transformation as well as interaction with other stakeholders, a research area that has been under-investigated in digital humanities. (by our Panel members)



Taiwan



- Country Road
- Township Road
- Shipping Route
- Visitor Center



Penghu Archipelago

Types of Cultural Landscape on Penghu

Type 1: Religious in nature



Five general system



Pagoda



Shigandang



Temple

Types of Cultural Landscape on Penghu

Type 2: Cultural landscapes with economic interests



Stone weir



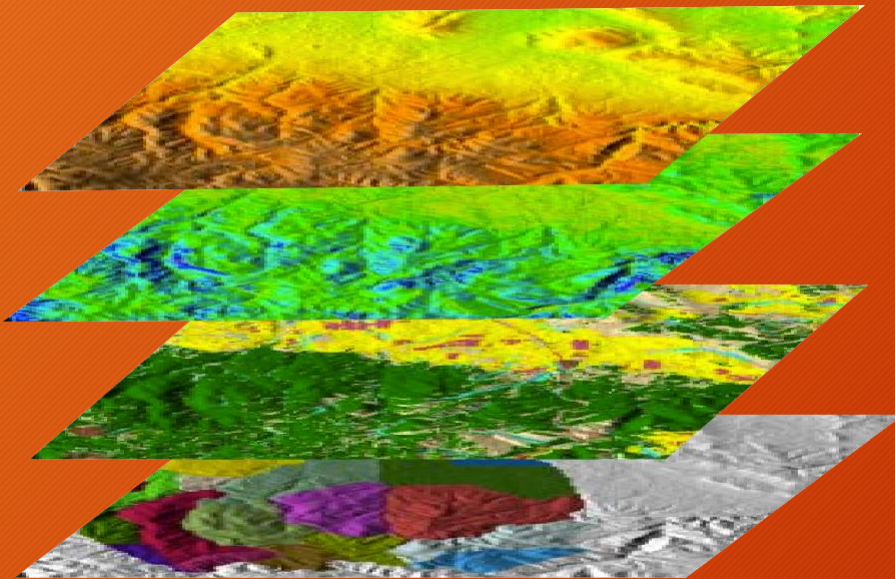
Caizhai (garden)



Intertidal zone

Research Question

- How can cultural landscapes be described, documented, analyzed, managed and preserved?



GIS

- Researchers use GIS to record and describe cultural landscapes. (Spatial data)
- How can researchers record the temporal characteristic attached to cultural landscapes?

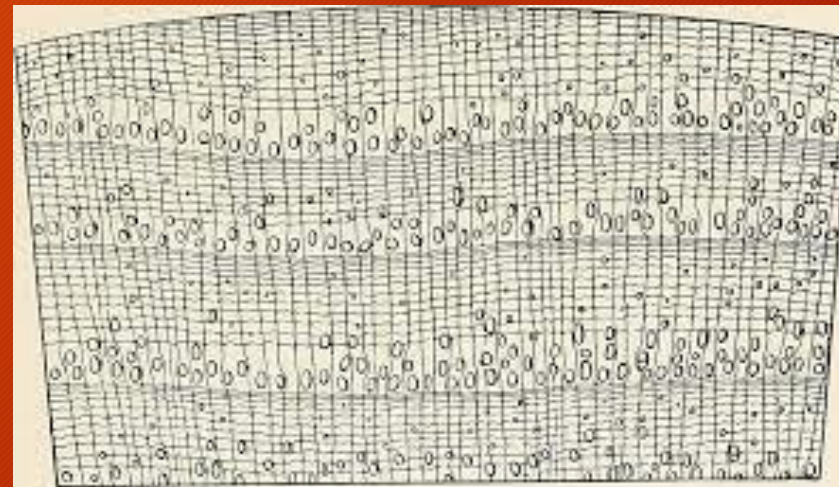
Why Temporal Characteristics Matter?

- Geographical location displays only a dimension of cultural landscapes.
- The temporal characteristics enrich the conceptual part and give more holistic views to document the cultural landscapes.

How



Annual ring

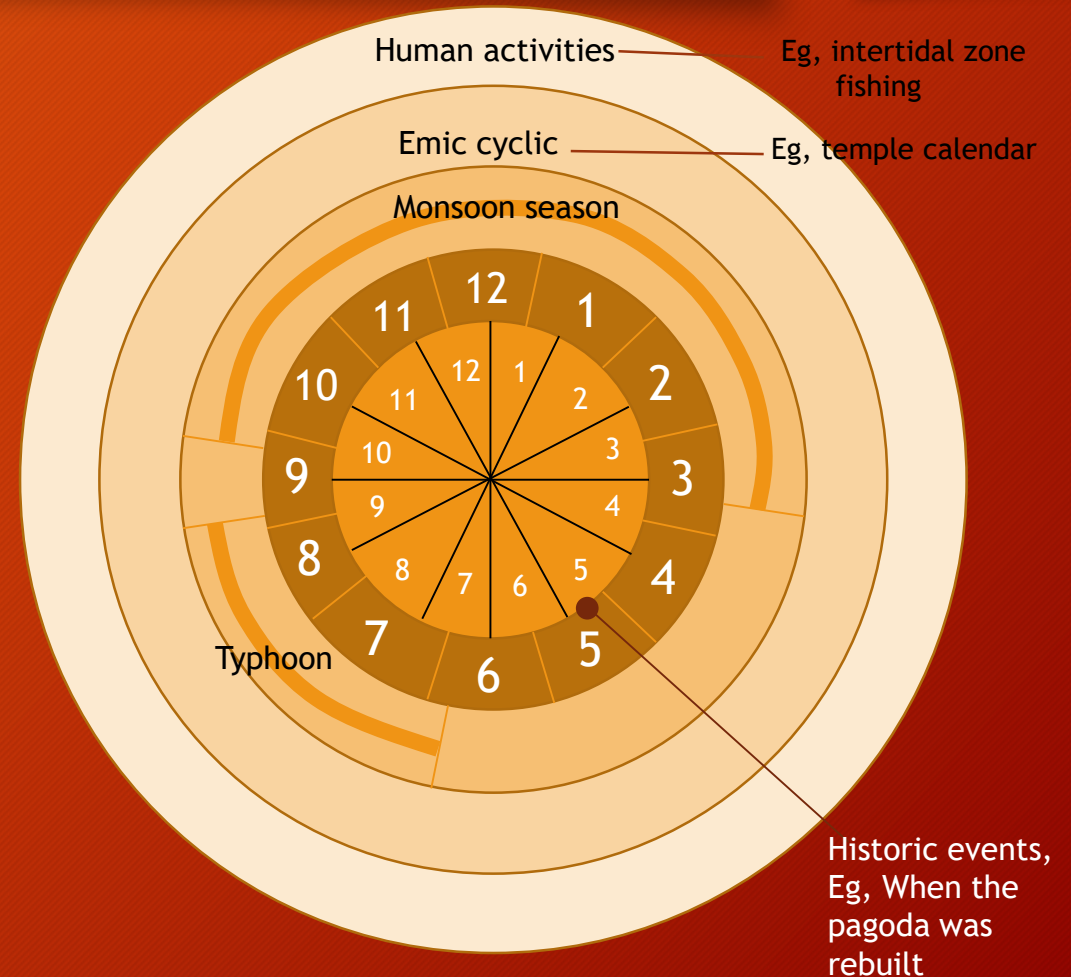


Unfold

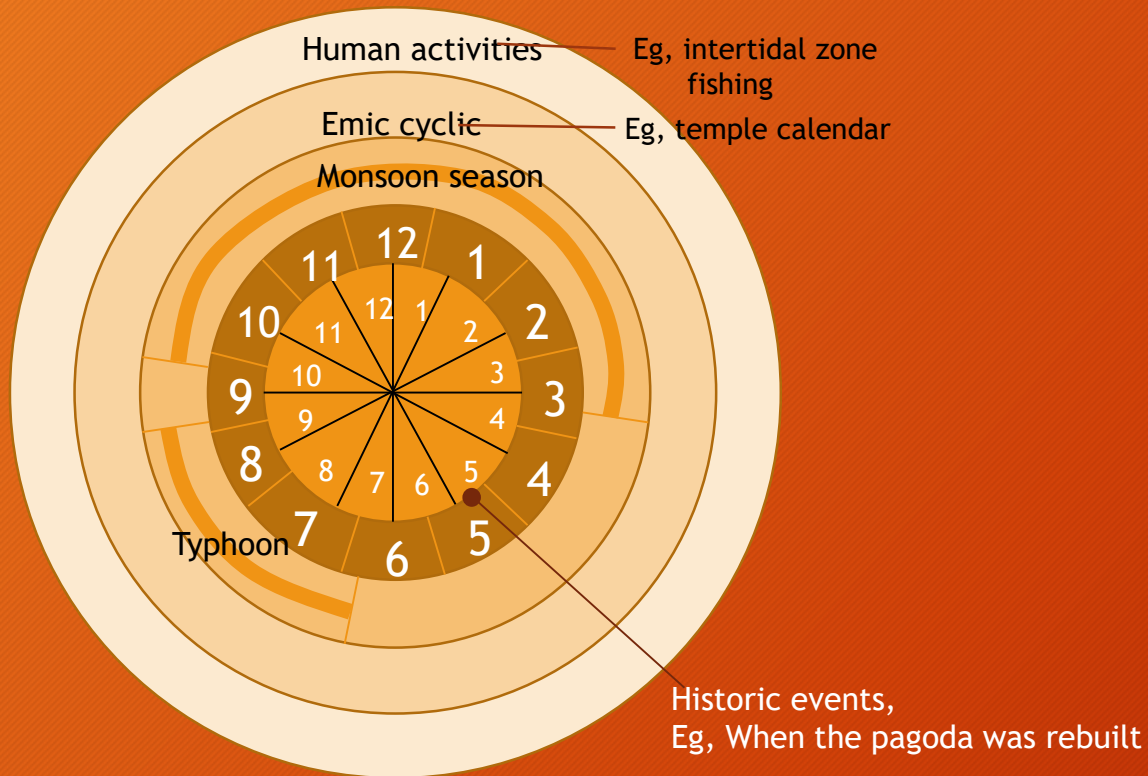
Temporal Annual Cycle of Cultural Landscapes

Data Annotation

- Linear reference timeline: solar and lunar calendar
- Historic events
- Natural phenomena: Typhoon and monsoon seasons, tides
- Emic cyclic representations
- Human activities



From Annual Cycle to Linear Timeline



Linear Timeline

Solar calendar



Types of Cultural Landscape on Penghu

Type 1: Religious in nature



Five general system



Shigandang



Pagoda



Temple

Photo taking date and time:

GPS:

When it was built:

Temple calendar: patrolling date

Human activities : worship days

Photo taking date and time:

GPS:

When it was built:

Temple calendar: Gods
birthday, festival...

Human activities : worship days

Types of Cultural Landscape on Penghu

Type 2: Cultural landscapes with economic interests



Stone weir

Photo taking date and time:

GPS:

When it was built: social network

Tide :

Wind speed and direction:

Human activities : patrolling,
fixing, catching fishes



Caizhai (garden)

Photo taking date and time:

GPS:

When it was built:

Wind speed and direction:

Human activities : plant
different crops



Intertidal zone

Photo taking date and time:

GPS:

Wind speed and direction:

Human activities : when
people come

Trying to make sense of cultural landscapes

- Temporal characteristics need to be considered and recorded in cultural landscape research.
- Cultural landscape researchers require to collect information beyond GPS and time in addition to photos to make sense of it.
- Data annotation: linear reference timeline, historic events, natural phenomena, emic cyclic representations, human activities (according to the research focus).
- Revisit and redocument field is essential to trace the changes of cultural landscapes.

Thank you for your attention

