

Hazards and Impacts Group Planning Jago Cooper

Hazards and Impacts Group Input	
Name	Jago Cooper
Geographical Study Area	Caribbean / Cuba
Key Hazards	Relative Sea Level Rise: Coastal flooding Hurricanes: Wind shear, flooding Precipitation Change: Drought, environmental instability
Past Impacts	During human occupation, 6m rise in relative sea levels, fluctuating rates of hurricane activity and major changes in rates of precipitation over time
Human Response and Mitigation	Human responses and mitigation strategies identified archaeologically in settlement patterns, food procurement strategies and household architecture
Future Risk	Increased risk from all hazards, threat levels in the Caribbean are high. Some disaster management mechanisms in place for many of the hazards. Greatest threat comes from overall climatic instability and consequent societal insecurity.

Output:

Contributions to community messages:

1) New Knowledge

Pre-Colombian communities developed settlement locations, food procurement strategies and household architecture designs well suited to living through the impacts of relative sea level rise, precipitation changes and hurricane activity. Current populations in the Caribbean are interested in the possibility of developing coping strategies that utilise pre-Colombian knowledge for living through the impacts of climate change.

2) Your top 5 emerging new research questions

- a) How did pre-Colombian inter-settlement food distribution networks mitigate the impacts of local environmental hazards
- b) To what extent do flood analysis models highlight the strategic location of pre-Colombian settlements
- c) How does bathymetric and DEM modeling reveal details of short-term coastal flooding events as a result of long term relative sea level rise
- d) How do pre-Colombian house designs withstand hurricane hazards
- e) How can high resolution paleoprecipitation data from speleothem cores be linked to changing pre-Colombian food procurement strategies at site specific locations

3) Fundamental limits to progress

- a) Lack of sustained dialogue between archaeologists and paleoclimatologists in the Caribbean
- b) Different temporal and spatial resolutions between paleoclimatic and archaeological datasets
- c) Lack of local paleoprecipitation datasets in the Caribbean
- d) Social resistance to changing household architecture and food procurement strategies
- e) Lack of funding to develop community projects that implement pre-Colombian lessons to mitigate impacts of climate change

4) Blockages that can be removed by collective action

- a) Archaeologists to become more involved in discussions regarding modern climate change planning in the Caribbean
- b) Political inertia at national and local levels

5) Action Areas related to 2, 3, 4 above

- a) Funding application for speleothem cores
- b) Funding application for outreach project implementing practical pre-Colombian lessons for climate change mitigation in north central Cuba
- c) Public output in popular media to raise awareness of the importance of archaeological knowledge in understanding future impacts of climate change in the Caribbean

6) Synergy of research with outreach, education, heritage development

- a) Closer coordination with Cuban ministry for social development and urban planning
- b) Promote international teacher exchanges

7) Deliverables (immediate, + 1 year, + 5 years)

Research publications focused on pre-Colombian experiences of living through impacts of climate change in the Caribbean

Raised profile of archaeology in ongoing climate change discussions and planning in the Caribbean

Task:

“tasked to produce a collaborative power point and presentation and be ready to lead general discussions of the topics” (McGovern et al. 2009)

Timescale:

Oct 16th, Friday Evening, 1 hour and 45 mins

Aims:

- 1. Generate inter-disciplinary dialogue*
- 2. Link different geographical areas*
- 3. Establish timescales of hazards and rates of change*
- 4. Understand nature of impacts on past human populations key social responses*
- 5. Discuss key risks to modern populations*

Members Contribution and Key Themes:

Bring to Eagles Hill 5-10 mins of content with 5 ppt slides detailing Geographical Study Area, Key Hazards, Past Impacts, Human Response/ Mitigation and Future Risk.

Individual PPT content can then be discussed and integrated during group planning session on Oct 15th, Thursday evening.