

Building community and ecological resilience to climate change in Solomon Islands-Lessons Learned

Dr. Simon Albert s.albert@uq.edu.au

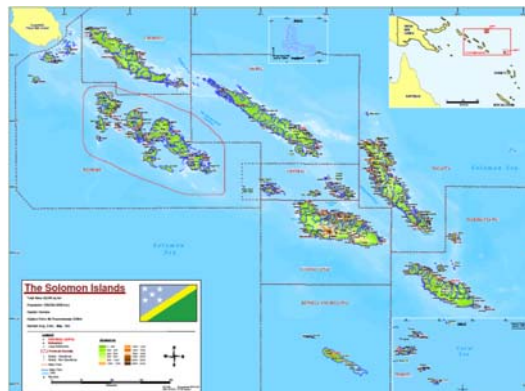
A/Prof Shankar Aswani, Dr. Badin Gibbes, Dr. Alistair Grinham, Dr. Chris Roelfsema, Mr. Nixon Tooler

Liz Dovey, David Hiba, Hudson Kauhiona



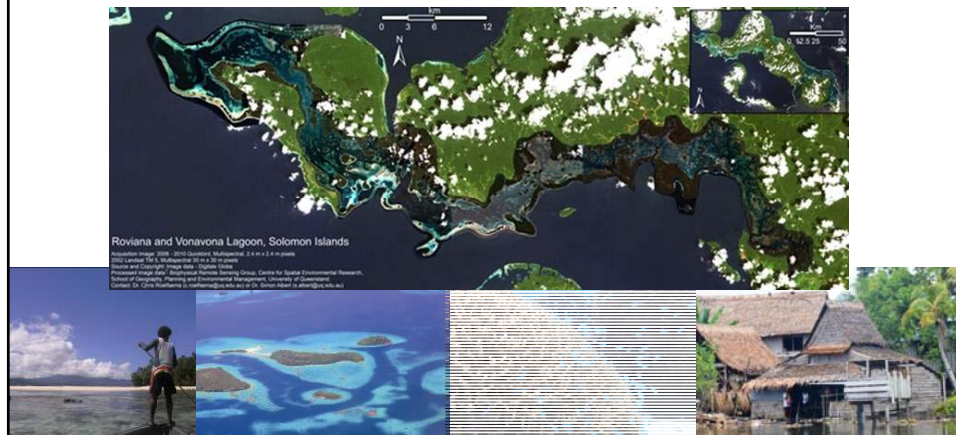
Solomon context

- 2000+ communities spread over 300 islands
- >80% rural
- Lack of transport/communication limits government outreach
- Community is the functional management unit



Roviana Lagoon

- High marine resource dependence
- Mix of low and high islands
- Coastal inundation
- Rich traditional knowledge
- 7000 people, 23 communities

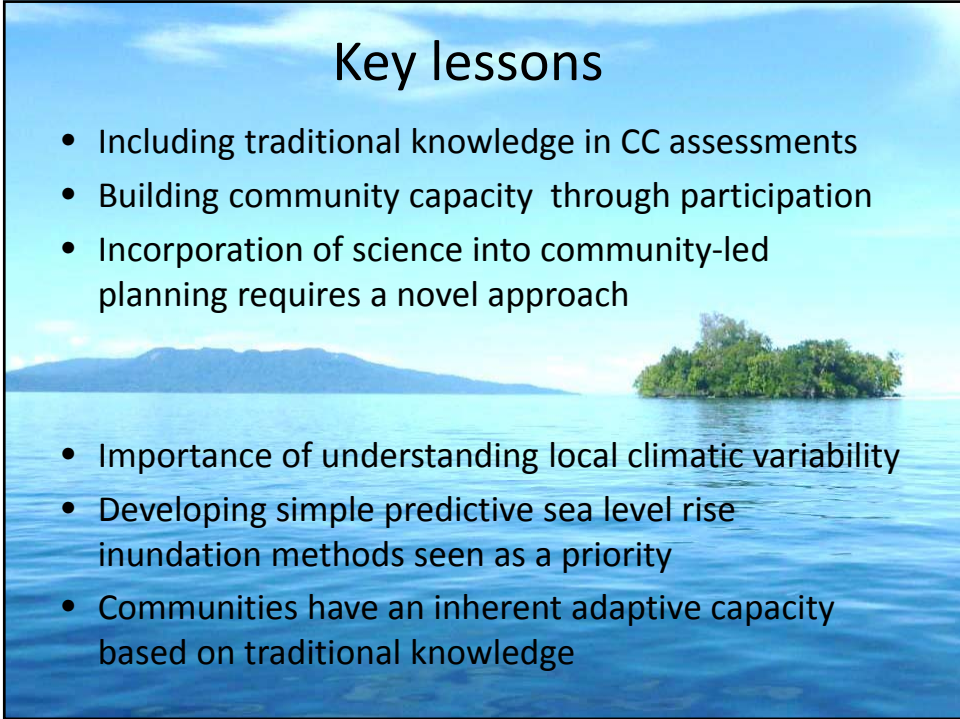


Objectives of PASAP Solomons- community focussed

- Building social and ecological resilience
- Focus on people and food
- Linking PCCSP outputs to local issues (food, water, shelter)
- Building community capacity
- Linking communities to government, scientists and regional organisations
- Community led adaptation planning



Key lessons

- Including traditional knowledge in CC assessments
 - Building community capacity through participation
 - Incorporation of science into community-led planning requires a novel approach
- 
- Importance of understanding local climatic variability
 - Developing simple predictive sea level rise inundation methods seen as a priority
 - Communities have an inherent adaptive capacity based on traditional knowledge

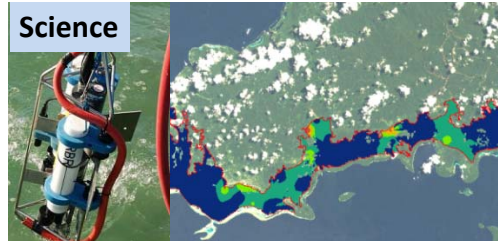
Integration of traditional knowledge into vulnerability assessments

Traditional ecological knowledge



- TEK integrated into GIS
- Provides unique historical dataset
- Science can provide a broader perspective
- TEK and science drive adaptation planning

Science



Building community capacity through participation



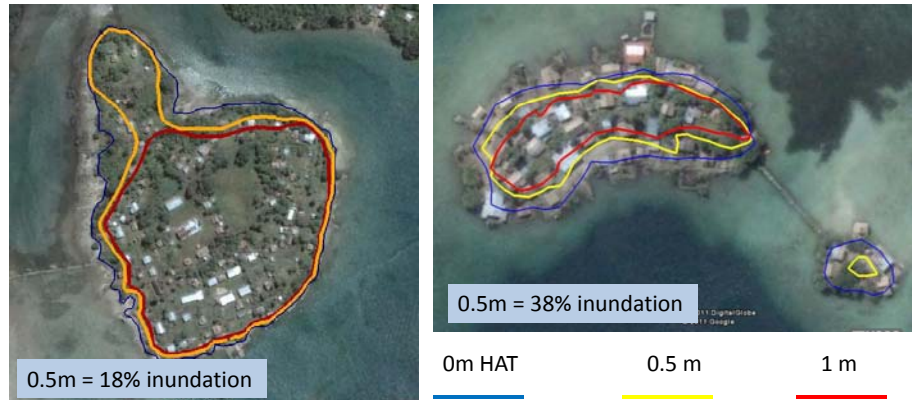
- Variability of environmental and climatic events requires local monitoring capacity
- Fly in fly out technical assistance likely to yield little benefit locally for those developing CC adaptation plans

Sea Level Rise Risk

- Sea level rise is high priority issue
- SRTM DEM lack accuracy
- LiDAR/RTK DEM too costly for community
- Laser levels provide balance between cost and accuracy



Inundation Risk Assessment



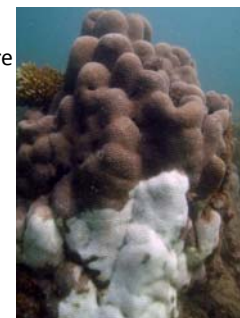
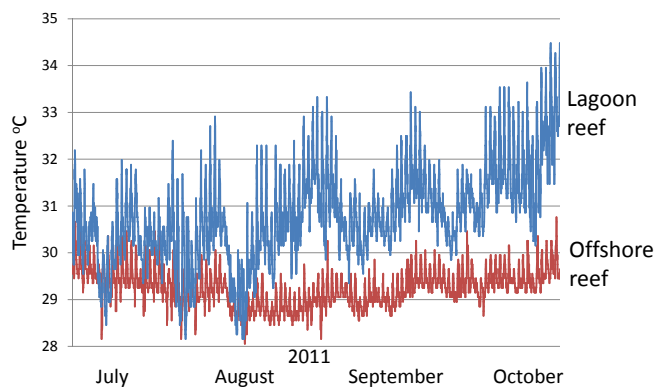
Advantages

Low cost
 Community participation provides direct feedback
 Permanent HAT, 0.5 m, 1 m pegs
 Community can implement independently

Disadvantages

Lower spatial coverage
 GPS error in map development

Variability



- Temperature variability linked to reef susceptibility

Incorporating science into community planning



- Transferring scientific outcomes into community led plans requires more than reports and presentations

Incorporating science into community planning

- Manual GIS to visualise data
- Allows science results to be easily viewed
- Provides an interface for blending traditional and scientific knowledge

Information Flow

- Technical Report-Awareness-Resilience Plan



- Unexpected outcomes-commUNITY

Balancing quantitative and qualitative vulnerability assessment (VA)

- Large multi-disciplinary quantitative VA assessments not viable at all sites
- Community driven VA approaches show promise but can miss key issues
- Developing a model that balances the two is required



