



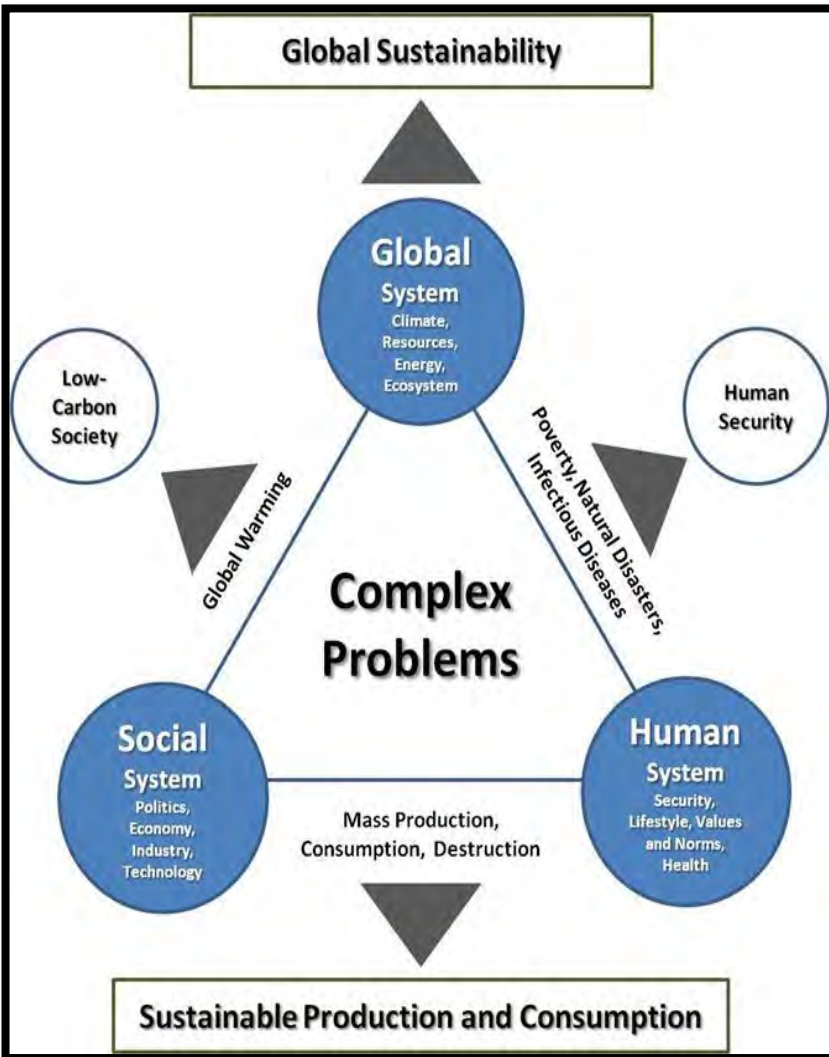
Lessons learnt from UNESCO Sustainability Science Demonstration Sites

A socio-environmental perspective

(GRCOS) #00212K

Sustainability Science Approach

Natural Engineering Social Science



Cultural Heritage – People, Place & Space



SS Demonstration Sites

Siem Reap, Cambodia - Restoring and Enhancing Angkor World Heritage Site and Siem Reap City Water Systems

Ifugao Rice Terraces, Philippines - Rice Terraces of the Philippines Cordilleras

Langat River Basin, Malaysia - Restoring and Managing Langat River, Malaysia for Future

Langkawi Geopark, Malaysia- Water and Environmental Sustainability in Langkawi

Davao, Philippines - Enhancing Resilience to Disasters of Urban Water Systems of Mindanao

Common Themes

Community Inclusive Sustainability Science

Accurate Data

Water Resource Management – Surface and Ground Water

Solid and Liquid Waste Management

Tourism

Industries – polluters, employment

Lack of political will – good policies, poor enforcement/implementation

Sustaining ecosystems and Communities

Local and Indigenous Communities (Ifugao; Orang Asli)

Cultural Heritage and Conservation

Policy Challenges

Legal Frameworks, Implementation and Enforcement

Lessons Learnt – Socio- environmental Perspective

Sustainability Science

Sustainable Development

What it means for communities

Inclusive policy Making

Inclusive Development

Community agency as an essential value, not
an add on

Water Resource Management

Water as a resource

Water as a commodity

Data on water extraction and usage

Access

Pricing

Solid and Liquid Waste Management

Waste Management practices

Public Service

Access and coverage

Waste water treatment

Solid waste management

Plastic

Tourism

Increased tourism as a policy goal

Impact of tourism

Tourists as stakeholders

Infrastructure

Impact on culture

Exclusion of local communities

Sustaining ecosystems and Communities

Ecosystem and sustainable environment
as a goal

Linking goals with community
aspirations

Local and Indigenous Communities

Lack of understanding and appreciation of indigenous identity, culture

Exclusion from policy making

Documentation

Need for the preservation of cultural heritage, rituals, folklore, traditional practices, arts and crafts

Museum

Curricula – Schools/Universities

Policy Challenges

Protecting Heritage Sites and Generating
Tourism, Revenue & Development

Environment Versus Development

Competing Interests of Stakeholders

Policy Ownership - Implementation

Challenges for Communities

Heritage

Livelihoods

Survival versus Sustainability

What we are aiming for

Ecosystem

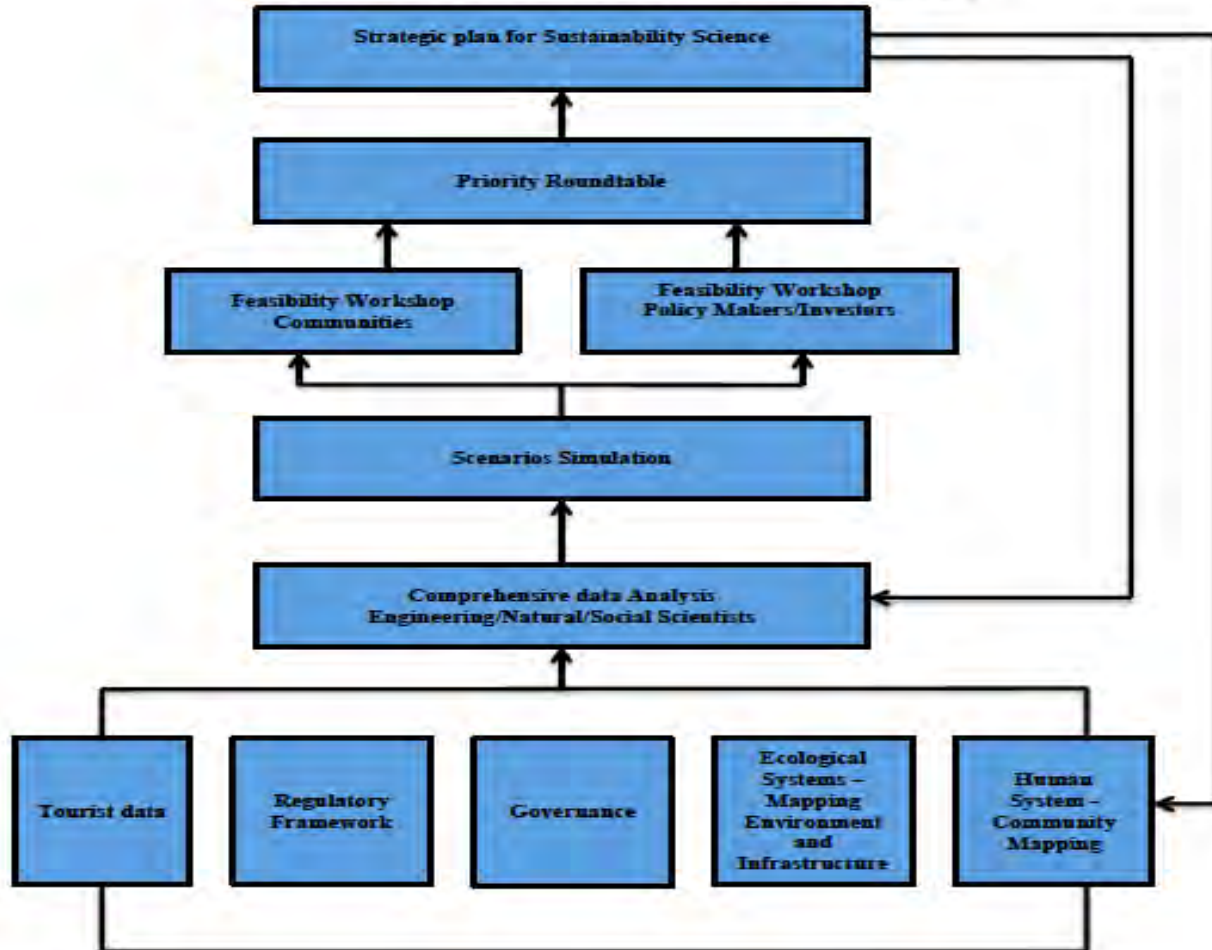
Local Communities

Tourist

Academic research

Good Policies

Integrated Strategies Framework for Sustainability Science



Conclusions

Inclusions at the Project Inception

Community Best Practices

Public Policy and Communities

Full cycle of processes

Taking back research to communities
and policy makers