MACBIO
Marine and Coastal Biodiversity Management in Pacific Island Countries

GIS Capacity Building in Pacific Island Countries: **The Q- BOOK Moodle**

SPREP — Secretariat of the Pacific Regional Environment Programme

IUCN

giz

On behalf of:
Federal Ministry for the Environment, Nature Conservation, Building and Nuclear Safety
of the Federal Republic of Germany

Motivation

MACBIO

- High need to conserve and use marine resources sustainably
  - Support and guidance open source GISs
- Specific support in Pacific: Q-GIS tutorials, trainings,Customized solutions
→ meet specific questions of regular GIS User

Needs assessment Questionnaire

Needs assessment for a learning resource for Geographical Information Systems (GIS)

Your background and specific interest in GIS

Thank you for taking part in this survey, an effort collaborated between the regional MACBIO project and the SPC Geoscience Division.

In this questionnaire, we want to learn from the experiences, interests and needs of GIS practitioners to be able to design and provide suitable GIS service support resources.

Your participation will help to tailor the specific needs of GIS users in the Pacific.

Outline

1. Sustainable Capacity Building in Pacific Island Countries (PICS)

2. Skill-Based and Narrative-Driven Training Models

3. GIS Community: Q-Book Moodle

4. GIS Community Video

5. Next steps and Discussion

Sustainable GIS Capacity Building

1. Support **open source software**: Help from ArcGIS to QGIS:

2. Linked to **existing efforts** in Pacific

3. **Pacific specific:** Identification

4. **Comprehensive**, but condensed:

5. **Portable version** possible: Includes downloading files of software and data

6. **Crowdsourced** by different agencies

7. **Moderated**, quality assurance

8. **Upgradeable** and Open-ended: Starting with basics continuing with advanced topics
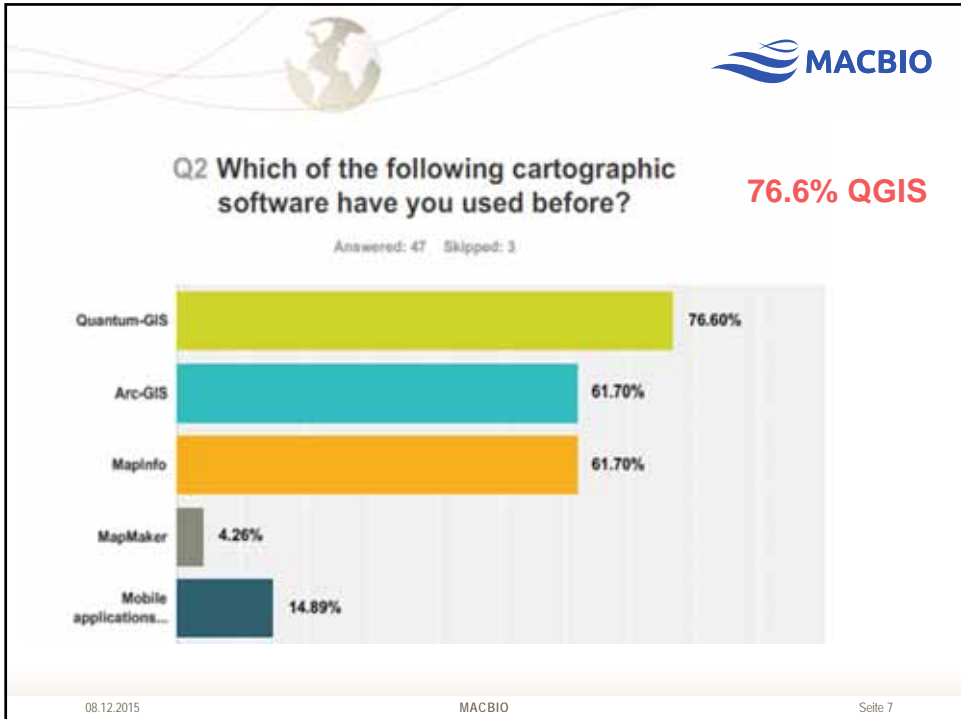
Seite 5

1. Open source

- **Why Q-GIS?**
- **Arc GIS and Q GIS dualism**

Seite 6

2. Linked to existing efforts:
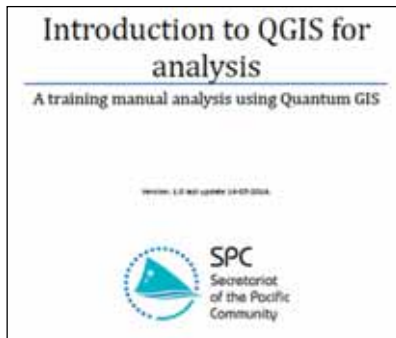## Geospatial Data Repository, Web-mapping

4

2. Linked to existing efforts:
Face to face training, Toolkits

2. Linked to existing efforts:
GIS Community

3. Pacific related

4. Comprehensive, but condensed

- Communication among different organizations
- Combines existing resources in capacity building
- Avoid duplication, overlap, repetition

5. Upgradable and open ended

- Focus on "core" aspects of GIS
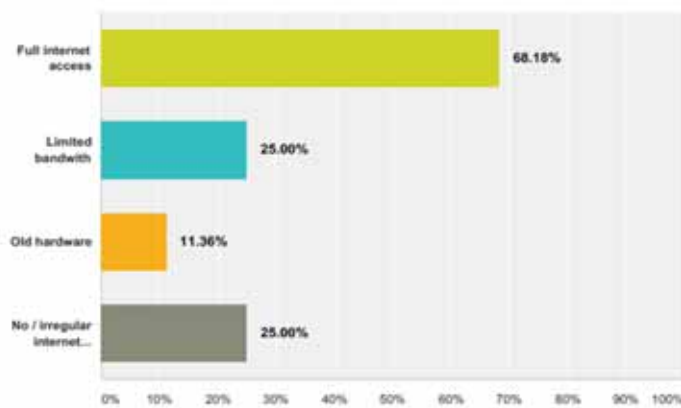- Set opportunities for continual self-development
- Open ended

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6. Portable version, that works offline

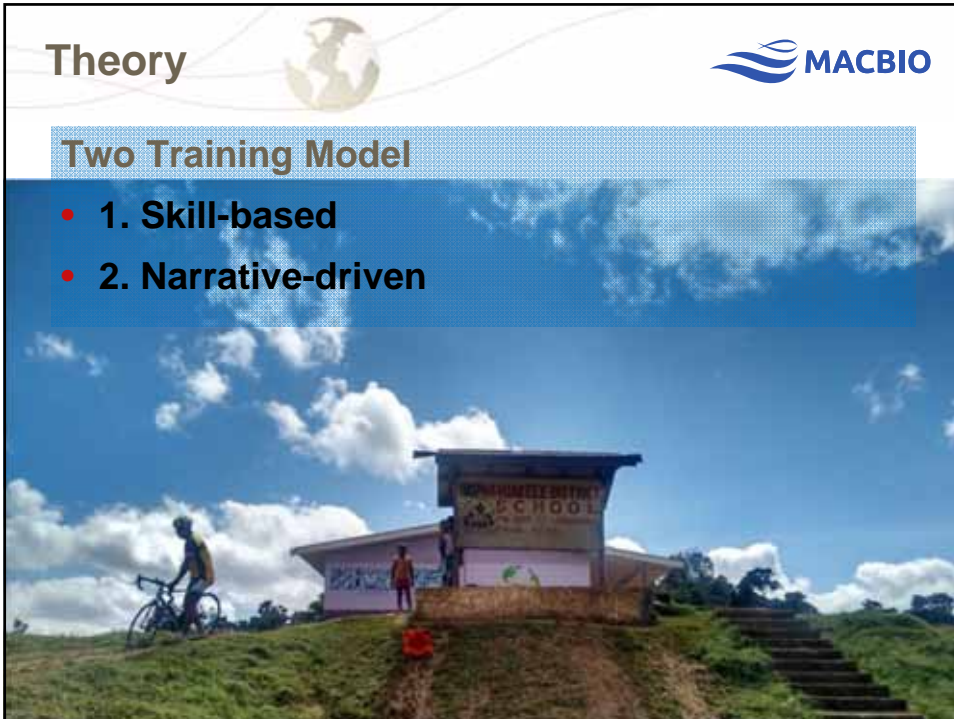**Q9 What technical requirements do you have using the resource?**
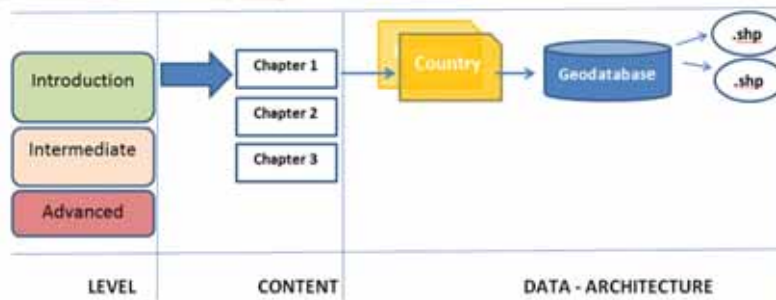
Answered: 44   Skipped: 8

Full internet access	68.18%
Limited bandwith	25.00%
Old hardware	11.36%
No / irregular internet...	25.00%

0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%

Seite 14

7

Theory | MACBIO

Two Training Model
- **1. Skill-based**
- **2. Narrative-driven**

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1. Skill based Training Model | MACBIO

- **In line with skill level and GIS tools**
- **Country specific (***Fiji, Kiribati, Salomon Islands, Tonga and Vanuatu)*
- Possible certification (under discussion)

Content Example Q-GIS Tutorial

Introduction

1. Getting started
2. User Interface
3. Coordinate System/Projection
4. Viewing Spatial Data
5. Data Creation and Editing
6. Spatial Analysis
7. Creating Great Maps

Intermediate

1. Different data formats
2. Spreadsheets
3. Geo referencing
4. Working with a GPS receiver

Advanced

1. Plugin: Python
2. Forest Change Detection
3. Coconut Inventory
4. Calculating soil loss
5. Land resource simulation analysis

The Pacific Q Book Moodle

MOODLE @ www.pacgeo.org/edu

"*Transfer of learning*": Q- Book Moodle

MACBIO

- ***Modular Object- Oriented Dynamic Learning Environment***:

- *To moodle* – process of enjoyable tinkering that can lead to growing knowledge, insight and creativity.

- Online learning Management System, designed to improve interaction between Teacher/Student.

- easy to use and get going

- Learning through collaboration

- People can modify/ change it

- Store, communicate, collaborate, evaluate

1. MOODLE SITE ENVIRONMENT — Geographical Information Systems

2. CATEGORIES — Q-GIS

3. COURSES
- TOPICS
- RESOURCES
- ACTIVITIES
- BLOCKS

Fazit: Moodle

MACBIO
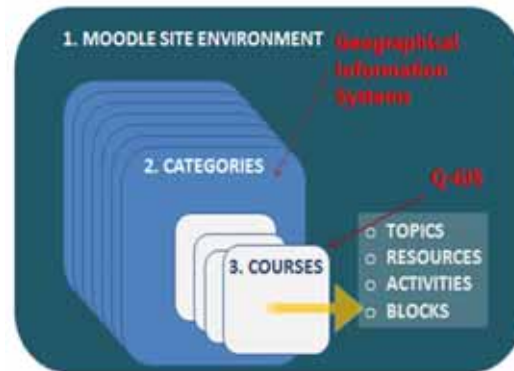
- **Communication** among different institutions, that provide capacity building and development expertise

  - Built on **existing resources in capacity building to avoid overlap** & repetition

- **Integration** with local GIS user groups

- Linkages across the local **GIS community**

- Enhance **GIS diffusion**: adopt and implement GIS

- *Users identification?*

GETTINGSTARTED

LEARNING MATERIAL

ArcGIS vs QGIS

PACIFIC GIS-COMMUNITY

SOFTWARE & ADD ONS

USER ACTIVITY

CONTACT

2. Narrative driven Training model

Local Szenario

PROBLEM

+

TOOL TOOL

TOOL TOOL

=

SOLUTION

1.Local Scenario/Problem - 2. Apply fitting GIS tools – 3. Solution
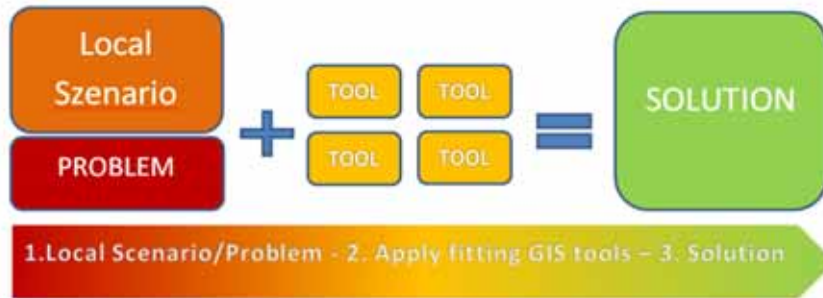
1. **Users Background: Needs assessment**
2. **Identification with a realistic and local scenario**

GIS related Questions/Themes in the Pacific & related spatial datasets

- **We need your story!**

- Disaster Risk and hazard is connected with spatial information and human needs (Cyclone Pam)

- Forestry, Marine, Urban planning, Wind energy

Capacity building resume

MACBIO

- **enhance the GIS-communities to grow together**
- develop the **wider GIS community**
  - shared discussion portals,
  - linkage of common events,
  - solve problems specific to the region
- address the **wide range of needs**
- provide a high level of **assistance to individuals**
- **Start basic:** core aspects of GIS
- enhance **new skills and knowledge**
- sustain the improvements: Follow-up and **linkage to existing**

Vinaka!

Kam raba!

Tank iu!

Tank yiu tumas!

Malo!

GIS

Discussion

1. Enhance the GIS-communities to grow together.
   > Who is interested in capacity building collaboration?

2. Built on already existing capacities:
   > MOODLE Linkage? USP / PACE-SD?

3. Narrative driven training:
   > We need your GIS story!