

# The Map Legend

A means for eliciting  
and documenting  
Indigenous and Local  
Knowledge

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Adapted from: Unit M10U02 by Nigel Crawhall  
In "Support the spread of good practice in generating,  
managing, analysing and communicating spatial information"  
(CTA & IFAD 2010)



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# It is all about the legend

- A map is silent without its legend.
- A legend is the foundation for documenting Indigenous and Local Knowledge .
- The P3DM process will surface “tacit” knowledge about cultural-natural landscapes – and the legend makes this available to others.

# Eliciting legend items

Before you map,

- obtain Free Prior Informed Consent (FPIC) on the use collected data will be put.
- start building the legend with indigenous and local knowledge holders and culture bearers.



Image courtesy Planterra/IUCN, Cuc Phuong National Park, Vietnam 2022

# Knowledge systems

- Communities are diverse. Those working on the legend need to represent that diversity.
- Such diversity stimulates
  - knowledge's cross-fertilization, and
  - interlinkages between cultural and biological diversities.



Image courtesy of G. Rambaldi/CTA

**Indigenous and Local Knowledge may be explicit, tacit, complex and/or ambiguous.**



Image courtesy of G. Rambaldi/CTA

# Tacit knowledge

- Tacit knowledge refers to things that indigenous peoples and local communities know about the landscape, ecosystem, biodiversity or cultural usage, but about which they do not regularly talk.
- It can be defined as skills, ideas and experiences that are possessed by people but are not codified and may not necessarily be easily expressed. While mapping, participants may express it for the first time.
- The facilitator can bring tacit knowledge to the surface by asking good questions and listening carefully.

# Complexity

- One word may hide complex information about a feature or ecosystem.
- Good interview techniques help elicit what one complex term means.
- For complex information, a **matrix** or other type of participatory tools can help capture the full meaning behind legend items.

CATEGORY	ANIMALS	TEMPERATURE	ELEVATION	VEGETATION TYPE	SOIL TYPE	GAME	OTHER FEATURES	MEANS
CLASSIFICATION	PROPIA	GORPISIO	TORORINDO	TIMDO	NGUNYENDE	TIONDO	KEVIG	
MOSOP	NYIGIS - HEAVY RAIN	KAITIT - COLD	NGUNYI - LOW	TIMDO - WINDY FOREST	NGUNYENDE - RED SAND HEAVY - CLAY SOIL	TIONDO - OPEN SAVANNAH	KEVIG - OPEN SAVANNAH	
MOOU	NYIGIS - HEAVY RAIN	KAITIT - COLD	KWEN - MEDIUM	TIMDO - WINDY FOREST	NGUNYENDE - RED SAND HEAVY - CLAY SOIL	TIONDO - OPEN SAVANNAH	KEVIG - OPEN SAVANNAH	
GAPOROWO	NYIGIS - HEAVY RAIN	KERINDET - MIST	TOROK - HIGH	TIMDO - WINDY FOREST	NGUNYENDE - RED SAND HEAVY - CLAY SOIL	TIONDO - OPEN SAVANNAH	KEVIG - OPEN SAVANNAH	
INGUNYENDE	NYIGIS - HEAVY RAIN	KERINDET - MIST	TOROK - HIGH	TIMDO - WINDY FOREST	NGUNYENDE - RED SAND HEAVY - CLAY SOIL	TIONDO - OPEN SAVANNAH	KEVIG - OPEN SAVANNAH	
PROGROGET	NYIGIS - HEAVY RAIN	KERINDET - MIST	TOROK - HIGH	SHAY - MIST	NGUNYENDE - RED SAND HEAVY - CLAY SOIL	TIONDO - OPEN SAVANNAH	KEVIG - OPEN SAVANNAH	
TEELEG	NYIGIS - HEAVY RAIN	KUTELI - WINDY	TOROK - HIGH	TEELEG - SANDY	NGUNYENDE - RED SAND HEAVY - CLAY SOIL	TIONDO - OPEN SAVANNAH	KEVIG - OPEN SAVANNAH	
TUIMHAT	TELEL - SANDS	PURGEI - WARM	KWEN - MEDIUM	TELEL - SANDS	NGUNYENDE - RED SAND HEAVY - CLAY SOIL	TIONDO - OPEN SAVANNAH	KEVIG - OPEN SAVANNAH	
LOGOMO	NYIGIS - HEAVY RAIN	KAITIT - COLD	NGUNYI - LOW	TOROK - CLEARING	NGUNYENDE - RED SAND HEAVY - CLAY SOIL	TIONDO - OPEN SAVANNAH	KEVIG - OPEN SAVANNAH	
TIRING	ININWIE - WINDY	KAITIT - COLD	KWEN - MEDIUM	TOROK - CLEARING	NGUNYENDE - RED SAND HEAVY - CLAY SOIL	TIONDO - OPEN SAVANNAH	KEVIG - OPEN SAVANNAH	
SAAPO	NYIGIS - HEAVY RAIN	PURGEI - WARM	NGUNYI - LOW	PURGEI - WARM	NGUNYENDE - RED SAND HEAVY - CLAY SOIL	TIONDO - OPEN SAVANNAH	KEVIG - OPEN SAVANNAH	
ISAMNET					MEKET - CLAY (WHITE)			
BOOYWO	NYIGIS - HEAVY RAIN	PURGEI - WARM	PAIPAI - FLAT	TURULET - GRASSLAND	NGUNYENDE - RED SAND HEAVY - CLAY SOIL	TIONDO - OPEN SAVANNAH	KEVIG - OPEN SAVANNAH	

# Reduce ambiguity

- Ambiguity means that a word has more than one meaning – this may be confusing when mapping.
- Are you (as a facilitator) clear what the legend item means?
- Good interview techniques will reduce ambiguity and save you time later.



# Biocultural diversity

To have a good mapping process, include diverse knowledge holders and culture bearers:

- Women, midwives, medicine specialists
- Elders, initiates, youth, hunters, trackers
- Religious leaders and practitioners
- Shaman, diviners and healers
- Herders, bee-keepers, fisherfolk, farmers

# Legend making

Legend items need to be sorted into features:

- Areas (polygons)
- Lines
- Points

Features should have an attribute:  
a data value, name or description



Image courtesy of G. Rambaldi/CTA

# Cultural sensitivity

Some information should not persist on a 3D map which will be on public display:

- Locations of endangered species.
- Valuable resources. (\*)
- Sacred sites. (\*)
- Taboo areas. (\*)

(\*) Depending on the decisions of the knowledge holders

# Cultural sensitivity

- Colours and social norms vary among communities.
- Choose appropriate colours and codes.
- Respect social rules and norms while encouraging diverse participation.

A topographic map background with brown contour lines on a light beige background. The lines represent elevation and are more densely packed in some areas, indicating steeper slopes. The overall appearance is that of a standard topographic map.

# **The legend making process**

# The Map Legend

- Maps are media in cartographic or digital formats.
- Communication occurs mainly by way of symbols.
- Symbols need to be interpreted via the map legend and its graphic vocabulary.
- Lacking universal standards each map has its own visual language.
- This language must be common property for communication to take place.

Source: Rambaldi, G. (2005) *Who owns the map legend ?* URISA Journal, 17(1): 5—13

# Legend-making process

One-to-one consultations  
and  
focus group discussions

Draft legend

Disagreement on proposed naming and description of land units

Matrix exercise

Draft final legend

Updating of the legend while working on the model

# Draft legend (Ogiek People, Kenya)

The legend is divided into three main sections:

- AREAS:**
  - MOOLU HIGHLAND (represented by a thick blue line)
  - SAAPOO MIDLAND (represented by a thick green line)
  - SOYWO LOWLAND (represented by a thick light green line)
  - ISINYAIT SANDY (represented by a dotted yellow line)
  - MENET CLAY (represented by a dotted black line)
  - NG'EEINDA SALTY (represented by a dotted red line)
  - NG'EREMUG LATERITE (represented by a dotted red line)
  - TIMTO CLAN TERRITORY (represented by a thick black line)
  - TEEGEG BAMBOO (represented by a thick blue line)
  - WAKTA PATH (represented by a thick white line)
  - WAKTA OO ROAD (represented by a thick red line)
  - IRONGIIT ANIMAL TRACK (represented by a thick orange line)
  - OINET RIVER (represented by a thick blue line)
  - KOONG'IK TRIBUTARY (represented by a thick light blue line)
  - TIILET BOUNDARY (represented by a thick black line)
- POINTS:**
  - KAP'AMWUEG FORESTER (represented by a white circle)
  - MAAT HAKESHIFT HUT (represented by a white circle)
  - INAAGAI TA HONEY STORE (represented by a white circle)
  - GE SUI NGUIT (represented by a white circle)
  - MUENGET (represented by a white circle)
  - GOOG TRADITIONAL SCHOOL (represented by a white circle)
  - GIIGOTWOT BOUNDARY TREE (represented by a white circle)
  - TIELUM BUT SACRED TREE (represented by a white circle)
  - IYEGISONEI DEATH TREE (represented by a white circle)
  - POONET HOLE IN TREE (represented by a white circle)
  - SOPIT IIT SACRED FIG (represented by a white circle)
  - IYEGIUNEKEE WASH PLACE (represented by a white circle)
  - IYEKIRUSIN INITIATES TOORUSIEK WASH PLACE (represented by a white circle)
  - KOONG'TA SPRING (represented by a white circle)
  - LUG LUG KOONIK RAPIDS (represented by a white circle)
  - ING'UTNGUT IIT MOOL SWAMP (represented by a white circle)
  - ISAWANIT SAAPOO SWAMP (represented by a white circle)
  - TYETAL TAL CROSSING (represented by a white circle)
  - TIRIIKWEG CLEARING (represented by a white circle)
  - KAPKOL LOGGING CO. (represented by a white circle)
  - WOYET BRIDGE (represented by a white circle)
  - KEPENET CAVE (represented by a white circle)
  - MAPWATTAP SHRINE (represented by a white circle)
  - TUGOSIEK SHOP (represented by a white circle)
  - SIPITALI HOSPITAL (represented by a white circle)
  - SUGUL SCHOOL (represented by a white circle)
  - WOYET-TOPCHERANGANY TRADITIONAL SENGWER-BUILT BRIDGE (represented by a white circle)
- LINES:**
  - TRUMBEG CHERIGOTI HUNTER TRAP (represented by a white circle)
  - OPIS OFFICE (represented by a white circle)
  - PLACE NAME (represented by a white circle)

On day 5 of the P3DM exercise, the map legend accounted for **44** features/layers





Images courtesy of G. Rambaldi/CTA

# Legend-making process

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Draft legend

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Matrix exercise

Draft final legend

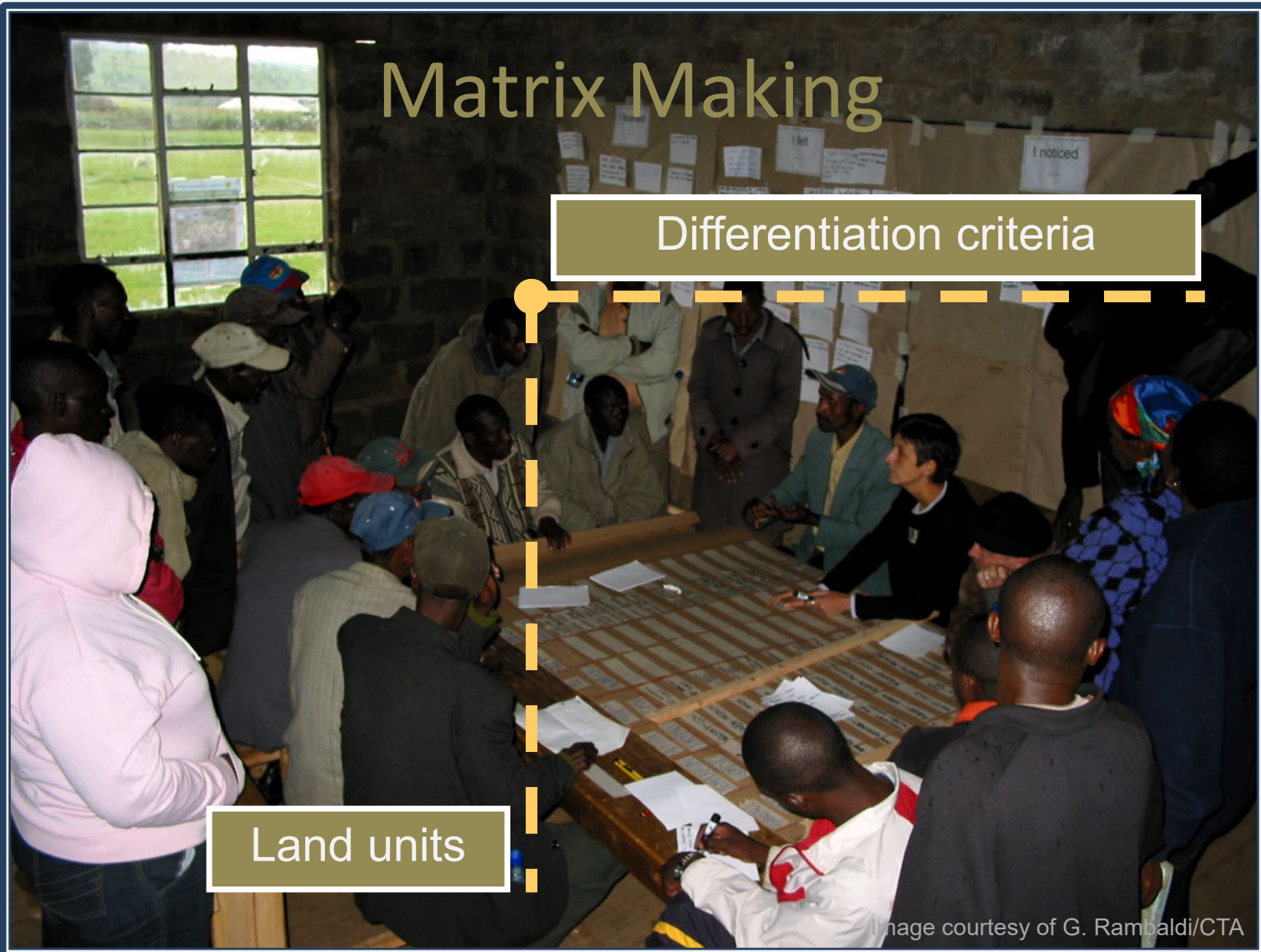
Updating of the legend while working on the model

# Matrix Making

Differentiation criteria

Land units

Image courtesy of G. Rambaldi/CTA



# Legend Matrix

Taste of honey

CRITERIA	RAINFALL	TEMPERATURE	ALTITUDE	VEGETATION TYPE	SOIL TYPE	GAME	WATER SWEETNESS	MEDICINE
CLASSIFICATION	ROPTA	GORISTO	TORORINDO	TIMDO	NGUNYENEG	TIOINDO	KIPIL	KETIG
MOSOP	NYIGIS - HEAVY RAIN	KAITIT - COLD	NGUONY - LOW	TIMDO - INDIGENOUS FOREST	NG'ERENG'AC - RED SOIL KAITIT - CLAY SOIL	NYINNY - SWEET NG'WAN - BITER	NYINNY - SWEET	
MOOU	NYIGIS - HEAVY RAIN	KAITIT - COLD	KWEN - MEDIUM	TIMDO - INDIGENOUS FOREST	NG'ARANG'AC - LOAM SOIL KAITIT - WHITE SAND	NYINNY - SWEET KIPIL - BITER	NYINNY - SWEET	
GAPOROWO	NYIGIS - HEAVY RAIN	KERUNDET - MIST	TOROR - HIGH	TIMDO (KACNET) - INDIGENOUS TROPICAL FOREST	NG'ARANG'AC - LOAM SOIL KAITIT - WHITE SAND	NYINNY - SWEET KIPIL - BITER	NYINNY - SWEET	
ING'UTAG'UOT	NYIGIS - HEAVY RAIN	KERUNDET - MIST	TOROR - HIGH (MOUNTAIN - FLAT)	ING'UTAG'UOT - SURGRASS WITH GRASS	NG'ANET - SALT (WET) KAITIT - MUDGY (WET) NYINNY - WHITE SAND	TIOINDO	NYINNY - SWEET KIPIL - BITER	
ROGROGET	NYIGIS - HEAVY RAIN	KERUNDET - MIST	TOROR - HIGH	SISEG/KETIG - SMALL BAMBUSO TREES	GEMGEM - BROWN (FERTILE)	TIOINDO	NYINNY - SWEET KIPIL - BITER	
TEELEG	NYIGIS - HEAVY RAIN	KERUNDET - MIST KUTEL - WINDY	TOROR - HIGH	TEELEG - BAMBUSO	NG'ARANG'AC - BROWN (FERTILE)	TIOINDO	NYINNY - SWEET KIPIL - BITER	
TUIMASAT	TELTEL - SHOWERS	PURGEI - WARM	KWEN - MEDIUM	TIMDO NE G'INGEN - TROPICAL FOREST	NG'ARANG'AC - BLACK (FERTILE)	TIOINDO	NYINNY - SWEET KIPIL - BITER	
LOGOMO	NYIGIS - HEAVY RAIN	KAITIT - COLD	NGUONY - LOW	TIRIK'EK - CLEARING	NG'AN - BROWN (HARD AND DRY) WHEN IT RAINS DURGY - REDDER SOIL	TIOINDO	NYINNY - SWEET KIPIL - BITER	
TIRIG	NYINNYIE - MODERATE RAIN	KAITIT - COLD KIPHEYET - ICE	KWEN - MEDIUM	SISEG/KETIG - SMALL BAMBUSO TREES	NG'ARANG'AC - BROWN (SOFT AND WET)	TIOINDO	NYINNY - SWEET KIPIL - BITER	
SAAPO	NYIGIS - HEAVY RAIN	PURGEI - WARM	NGUONY - LOW	TIMDO - FOREST (NO BAMBUSO)	TING - BLACK (SOFT AND WET) NYINNY - FERTILE (WET) KAITIT - WHITE SAND	TIOINDO	NYINNY - SWEET KIPIL - BITER	
ISAWANIT					MEKET - CLAY (WHITE)	TIOINDO	NYINNY - SWEET	
SODYWO	NYIGIS - HEAVY RAIN	PURGEI - WARM	NGUONY - LOW	TIMDO - FOREST (NO BAMBUSO)	NYINNY - SWEET KAITIT - WHITE SAND	TIOINDO	NYINNY - SWEET KIPIL - BITER	

Confidential layers



# Who owns the map?

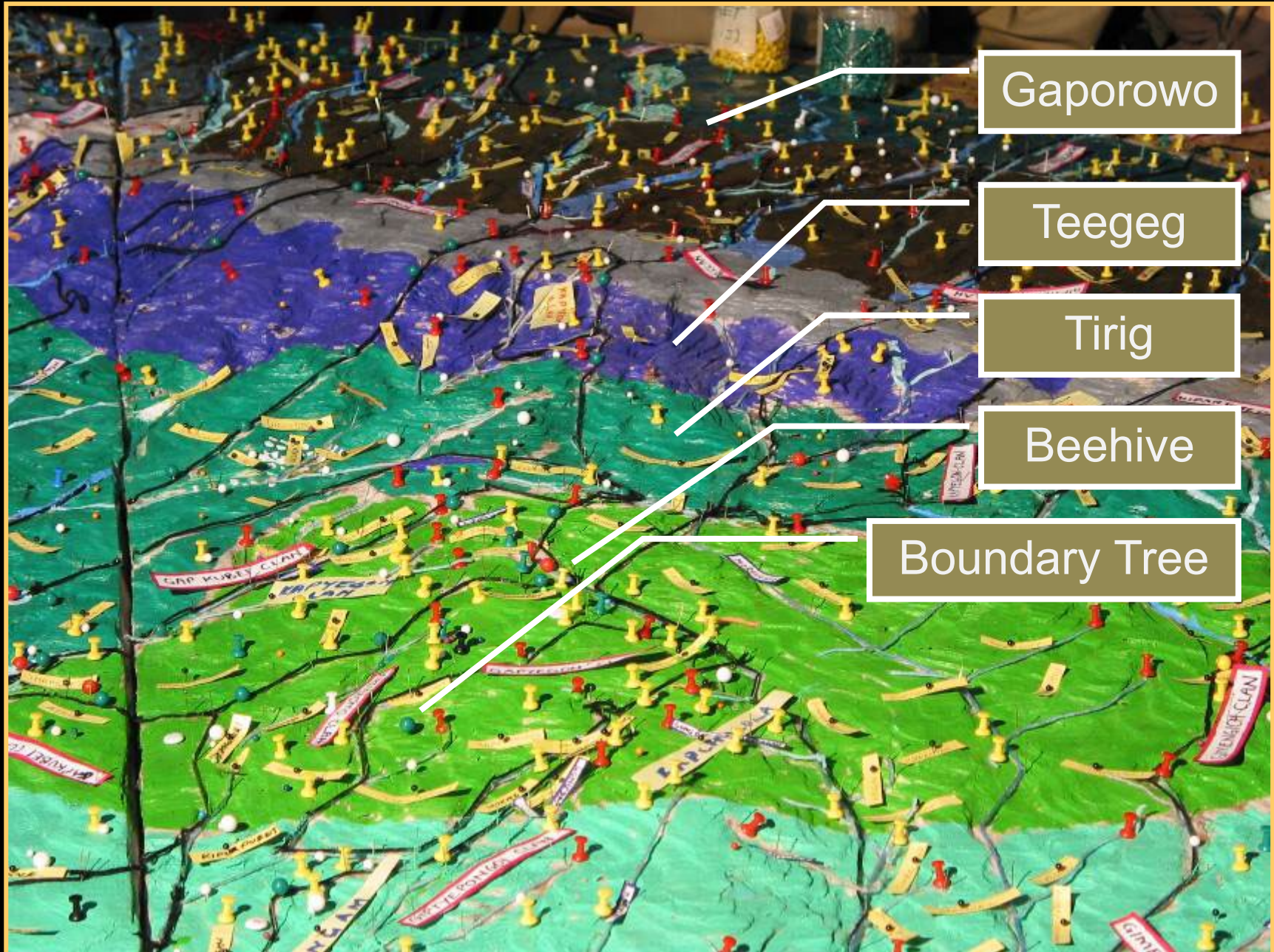
**Legend-making** is perhaps the most important part of the P3DM process.

If done correctly, it puts the knowledge holders in the lead (and control).

It allows them to agree on a complex network of ideas, concepts and interlocking criteria, and later locate and visualize these on the map.



Image courtesy of G. Rambaldi/CTA



Gaporowo

Teegeg

Tirig

Beehive

Boundary Tree

Image courtesy of G. Rambaldi/CTA



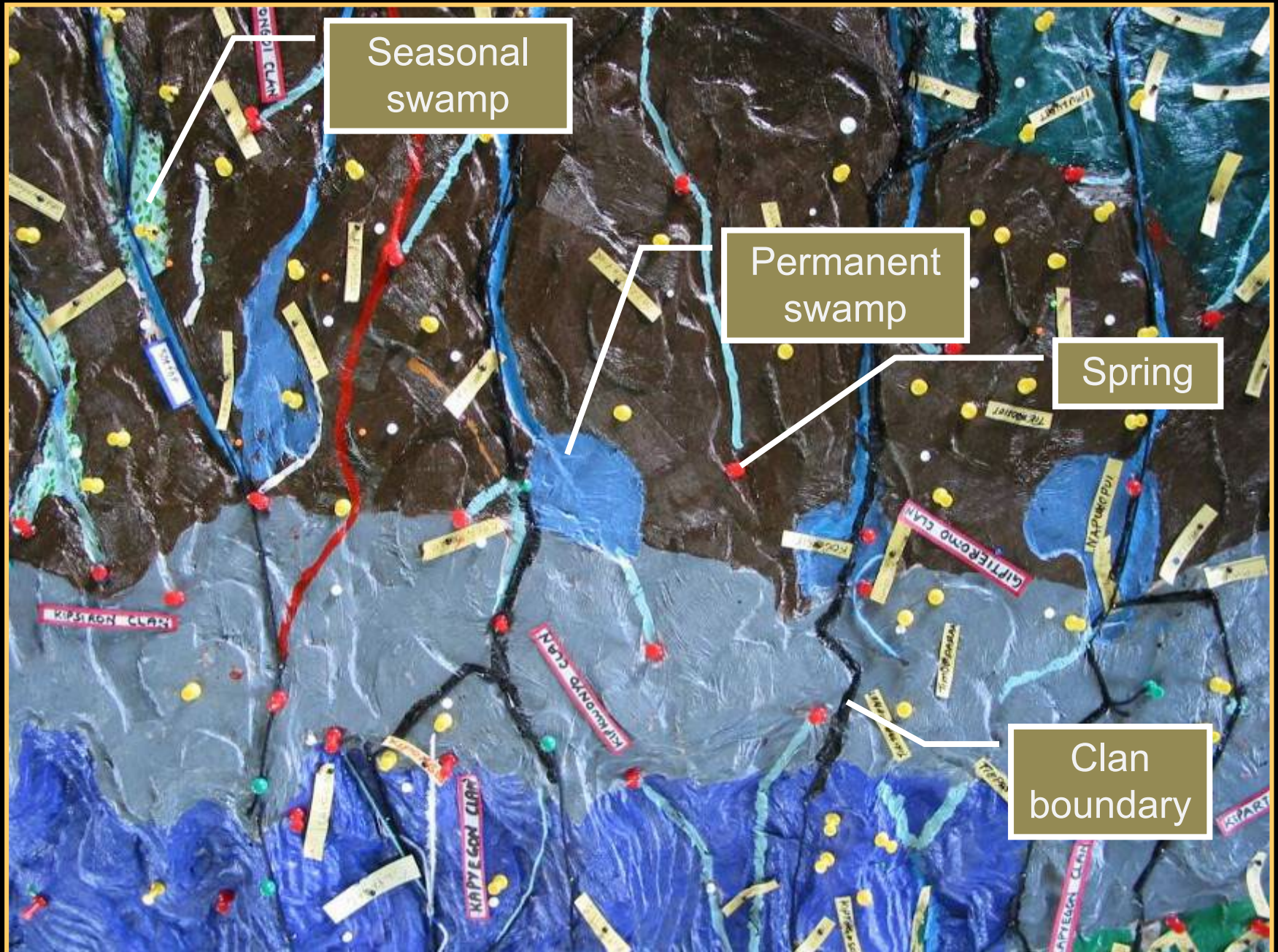
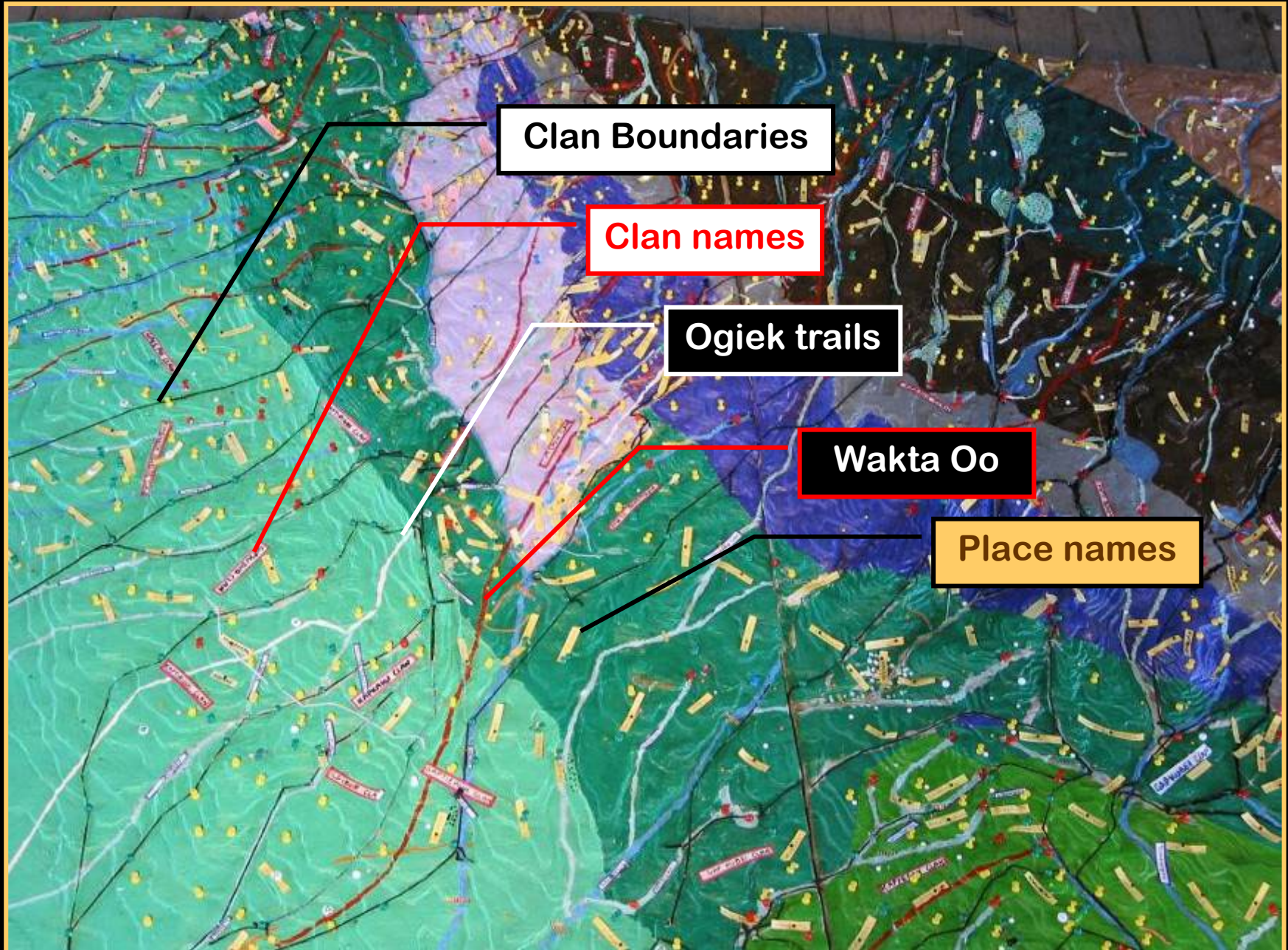


Image courtesy of G. Rambaldi/CTA



Clan Boundaries

Clan names

Ogiek trails

Wakta Oo

Place names

# LEGEND

## Participatory 3-D Model of Pu Mat National Park, Nghe An, Vietnam

Model constructed by members from the local communities in the framework of the Social Forestry and Nature Conservation (SFNC) Project with the assistance of the ASEAN Regional Centre for Biodiversity Conservation (ARCBC), the Vietnam National Parks and Protected Areas Association (VNPPA) and the National Environment Agency (NEA)



# Thank you

