



Complexity management and multi-scale governance

A case study in an Amazonas community

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Research Questions

- How VSM could support an assessment of self-governance in communities aiming to develop in a sustainable way?
- Exploratory research on self-governance in an indigenous association of communities in the Amazon jungle
- How the challenges of inter-organisational governance in a multi-cultural context are clarified through a cybernetic intervention?



Methodology

- Creative choice of methods:
 - Self-transformation methodology - (Espinosa & Walker, 2016, in press)
 - Boundary critique, VSM, Rich pictures + social cartography
- Improved self-transformation methodology,
 - useful for dealing with the variety of a multi-cultural context, supported by expert facilitation-



The Systemic Intervention

- Highly participatory discussion
- + Expert mode V&S analysis of main dilemmas and paradoxes of self-governance for sustainability
- *Participants have begun to identify and implement urgent changes to their governance structures*



Literature Review

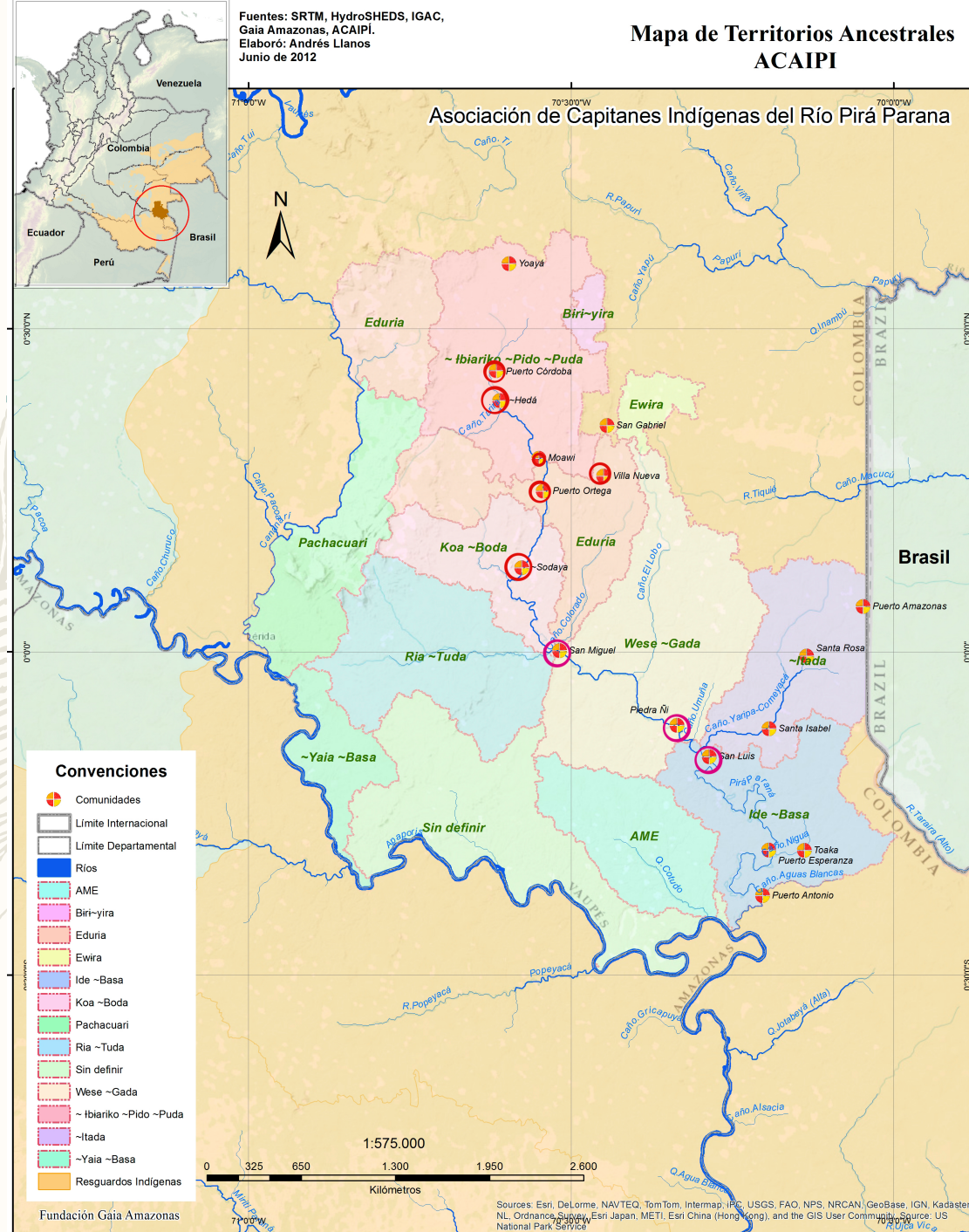
- Systemic methodologies contributions to support communities exploring their (sustainable) development options
- COR 'grand challenges' - how to develop a sustainable society (e.g. regarding food and water security) (Johnson & Smilowitz (2008))
- Considerable interest in COR in developing countries, to support issues of poverty reduction and sustainability (White et al (2011))
- Increased interest in complex systems approaches on businesses and societies sustainability (Paucar-Caceres & Espinosa, 2011).
- Gap in governance studies: studies to explain sustainability challenges and the tensions they bring to hold on power (Tihanyi, Graffin, & George (2014))
- The eco-system approach (Walter & Toews, 2010)
- How COR approaches may support democratic and participative decision making, and changes in the organisational structure that may enable coordination and cohesion within community organisations (Midgley and Ochoa-Arias, 1999; 2004; Tacket & White, 2000)
- Apart from few exceptions, there is limited evidence of how participatory and facilitated approaches help actors to address complex and uncertain problem situations during COR interventions



VSM and Governance

- The Cybsersyn project aiming at redesigning the governance structures in Chile (Schwaninger (2006a, 2006b, 2012), Medina (2006), Espejo (2009; 2015), and Leonard (2015))
- The Viability of Societies (Stokes, 2006)
- Societal viability and governance (Turke (2008))
- Schwaninger (2012; 2015): VSM to analyse governance issues in a Swiss county
- Espejo & Mendiwelso (2011) active citizenship for effective organisational structures dealing with policy.
- Toolkit on self-governance for sustainability (Espinosa & Walker, 2011, 2016; Espinosa, 2015) + applications:
 - in the ecovillage in Ireland (Espinosa & Walker, 2013).
 - in a food cooperative in Denmark (Tavella & Papadopoulos, 2014).

*Sacred
philosophy of
life - "Hee
Yaia Ketí
Oka" (ACAIPÍ,
2010, 2015).*



*The Pira
Parana
SES
'Territory of
the
Yuruparí
Jaguars,'*

A truly ecological society based upon a systemic self-governance structure



Each ethnic group has a place of origin, - given to them at the beginning of time:
Their destiny is to manage the resources, original knowledge and spirituality of their territory, by sharing and nurturing its biodiversity.

Traditional Governance Structures



Governance structures:

- World Orderers: highest authority ethnic group.
- Kubus: highest authority in each community: guide and protect through ritual practices, prescriptions and advice. knowledge of the territory, respect for the 'ecological calendar',
- Maintenance and use of *sacred sites* allow natural resources to continue their cycle, and for the region to maintain its bio-diversity

Colombian constitution of 1991, guaranteed the ability to govern themselves according to their own traditions

The Maloka

“Maloka”: the heart, from which the territory is managed, as a pattern of relationships between everything that exists.

Malokero organises and leads the ceremonies Kubu guides the processes of growth, and development, through the 'word of origin'.

‘Ecological Calendar’ and rituals: mirror the cycles of nature: sophisticated spiritual management system (spiritual sustenance and sustainability of the community)



Their Ecological Charter

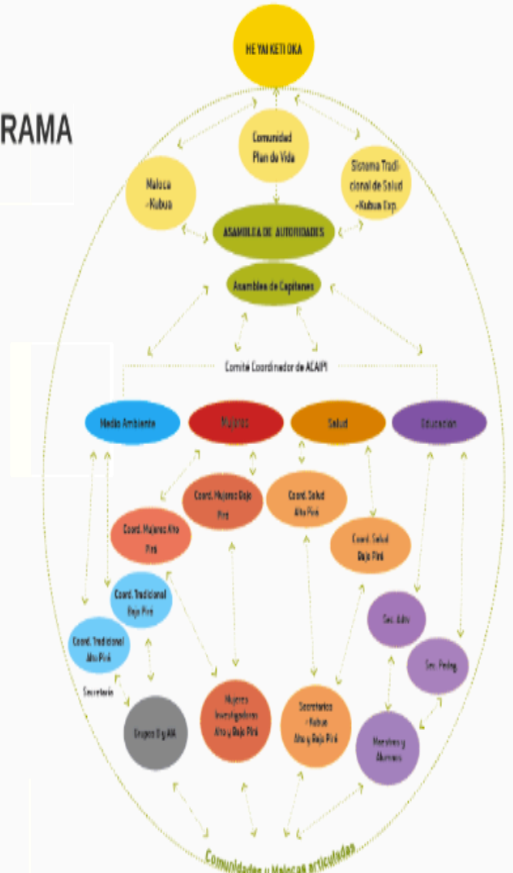


- All of nature, visible and invisible, is seen as a *community of social beings* who are related by a system of rights and obligations and governed by the principles of partnership and reciprocity
- All *illnesses* and ailments that afflict people are seen as the *result of the destruction of this system of rights and obligations*.
- *Cures* depend on the time, *connectivity of the rhythms of the cosmos*, nature and human activities, everyday rituals, growth and development.
- These rhythms involve the *four major annual periods: growing season, time of worms, time of wild fruits and 'Yuruparí' time*

ACAIPI

- Public entity with its own legal and territorial jurisdiction, its own assets and administrative autonomy
- Women, men and young adults from all communities elect a “Captain” as their spokesman at the General Assembly of Traditional Authorities

ORGANIGRAMA
PES 2010

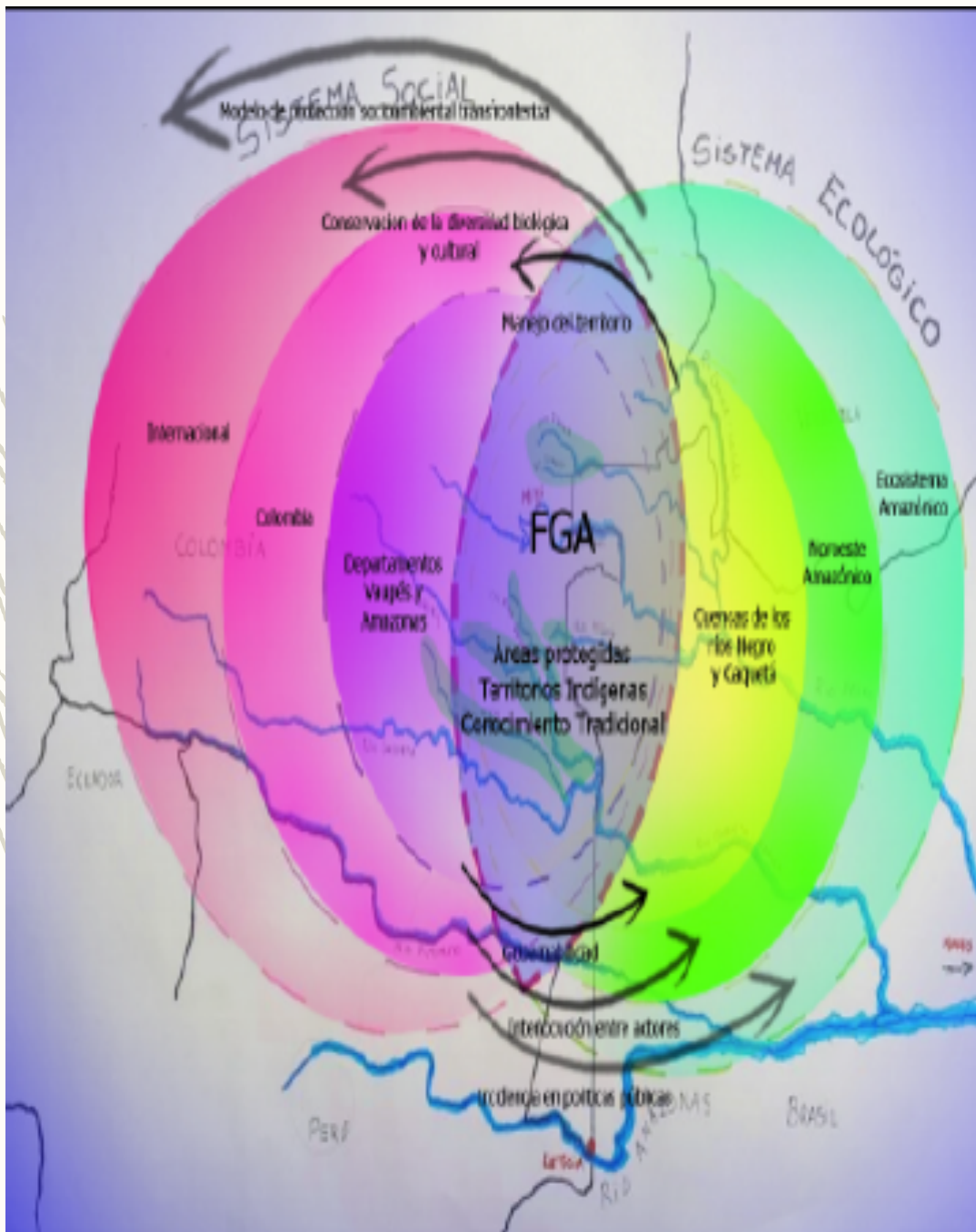




Sustainable Governance vs. the VSM

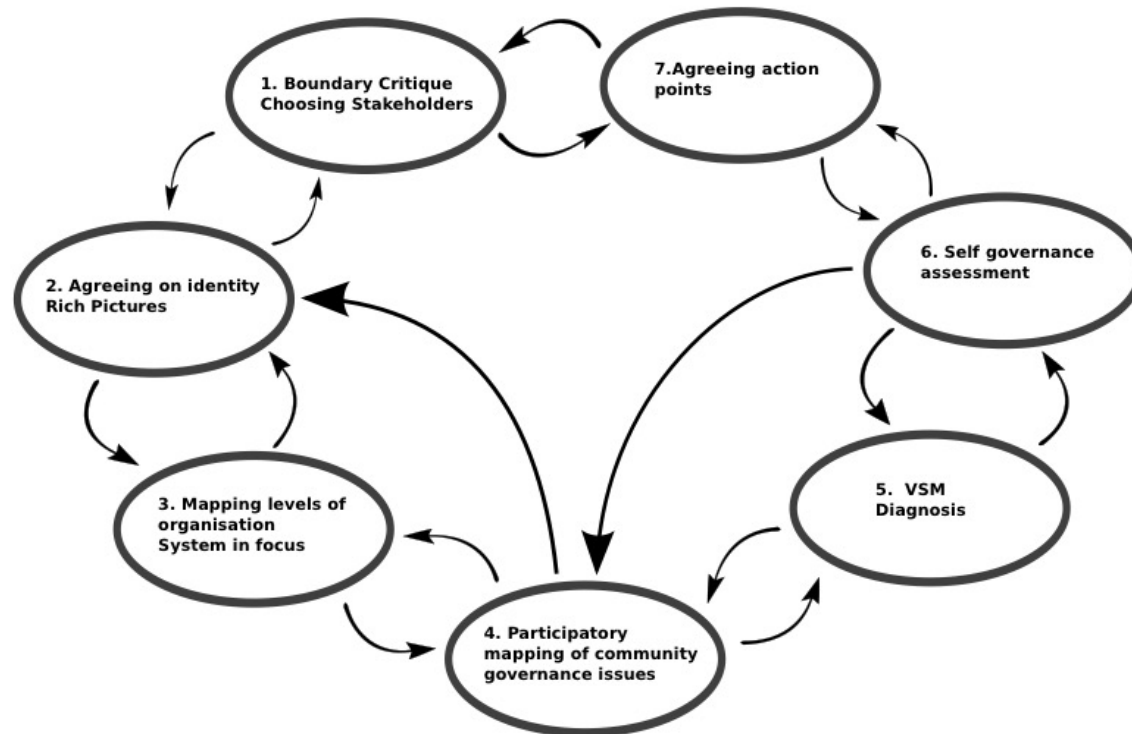
- Sustainability as ‘sustained viability’, (Espinosa & Walker, 2011, 2016)
 - the capacity to create, test, and maintain adaptive capability. *Holling (2001)*
- Governance
 - the organisational patterns of interaction (structure), emerging through developing joint tasks using specific strategies and mechanisms, to develop adaptive capabilities.
- A community
 - a complex system, which co-evolve with its socio-ecological system, as a result of self-organised and formal interactions among its agents (Andrade et al, 2012).
- A viable and sustainable community is one that
 - is able to keep a balanced (healthy) relationship with its socio economic and environmental niche,
- A societal governance system
 - needs to cope with the complexity of recurrent interactions between the society and its niche.

Self governance in a SES



- SES patterns of recurrent interactions result from
 - formally established community governance structures, and
 - informal recurrent interactions among community members,
- over their shared history of co-development in their socio ecological systems.

The (adapted) Self Transformation Methodology





Field work

- Clarifying the boundaries
 - Representatives from 3 ethnic groups:
 - *Tatuyo, Eduria and Barasano*
 - *fourteen (out of twenty-eight) communities:*
 - different sizes (5 small, 3 medium, and 6 large)
- Data collection
 - rich pictures and social cartography tools with our VSM inspired questions, for the data collection

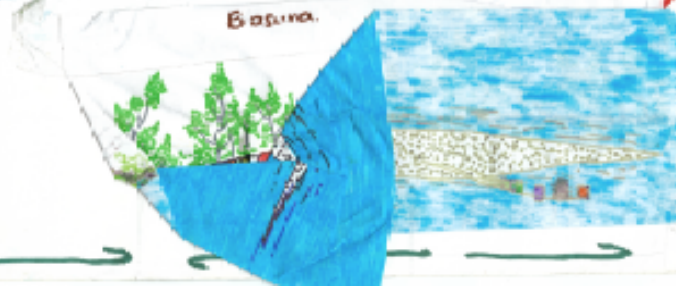
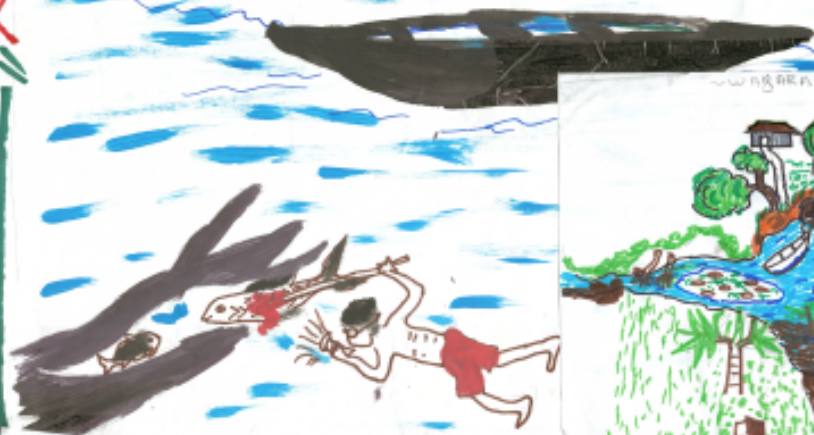


Self governance questions (examples)

- Co-evolution with their niche
 - How do you focus Community action on critical issues for sustainability?
 - When there is a critical situation, how effective are decisions? How well informed are decisions? How are they made? Which roles are involved?
 - Does the community take collective decisions about its future? When and how are these issues are discussed? Who are those involved in such decisions
 -
- Autonomy and cohesion
 - What roles are responsible for health issues, education and self - governance within your community?

Situación de manejo territorial

Situación de convivencia Social



Voy a robarme esta cuya sagrada para apoderarme los conocimientos de los saberes. Ha, ha, ha.

Primero la reunión
Luego
el ritual...!



Es mentira lo que dice los Sabedores, no me pasará nada, primero el estudio.

Me gusta destruir los sitios sagrados. No me importa lo q' diga la gente ni el tradicional.



Ole 2000.



Calendario Ecológico
cultural, Maloca.

manejo del mundo
tradicional.

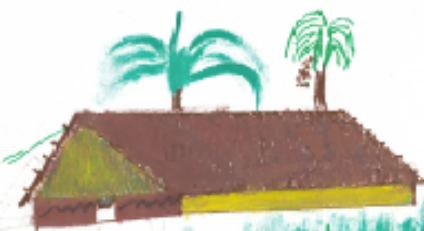
Hazloq' todo.

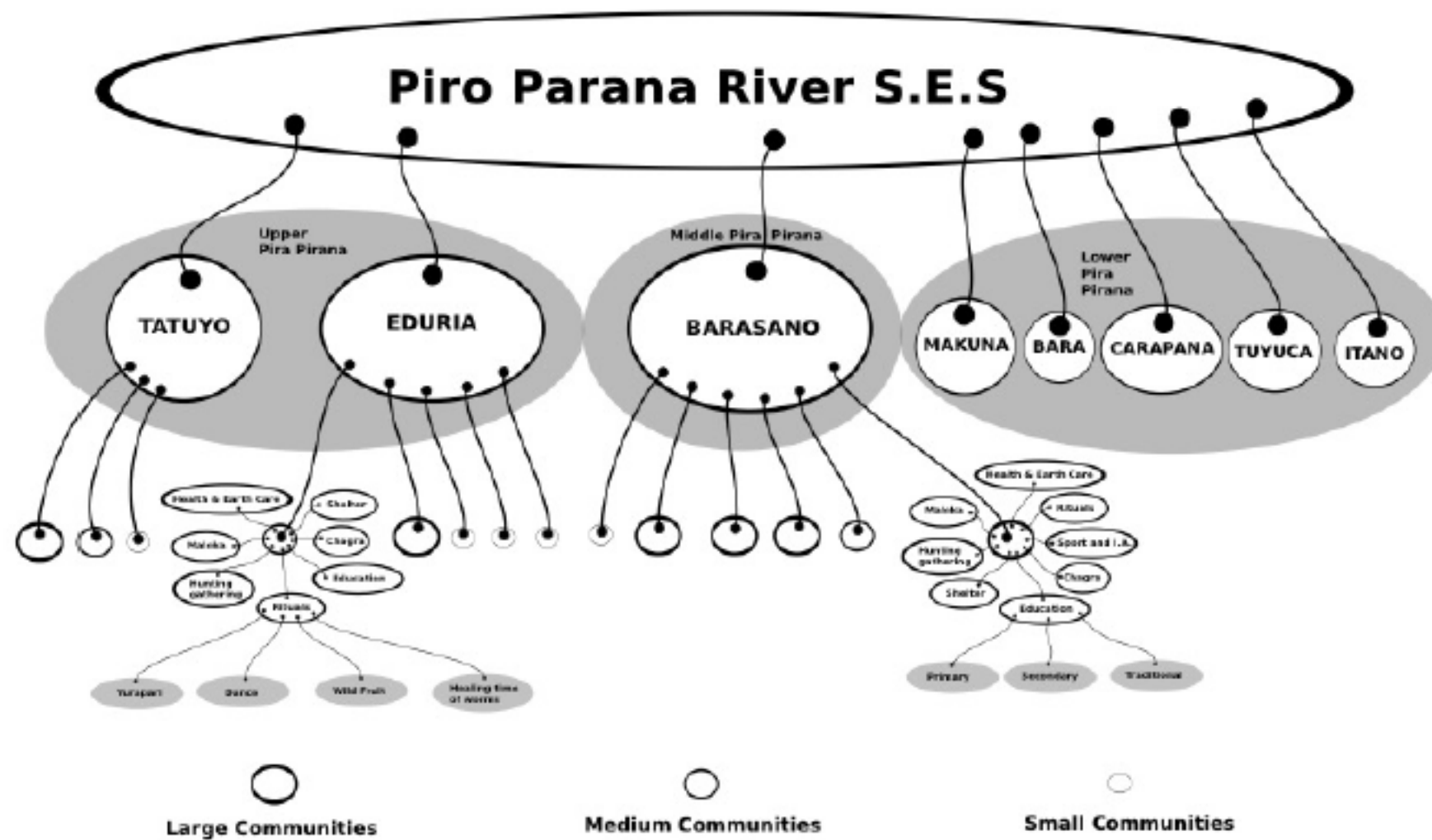


INTEGRANTES:

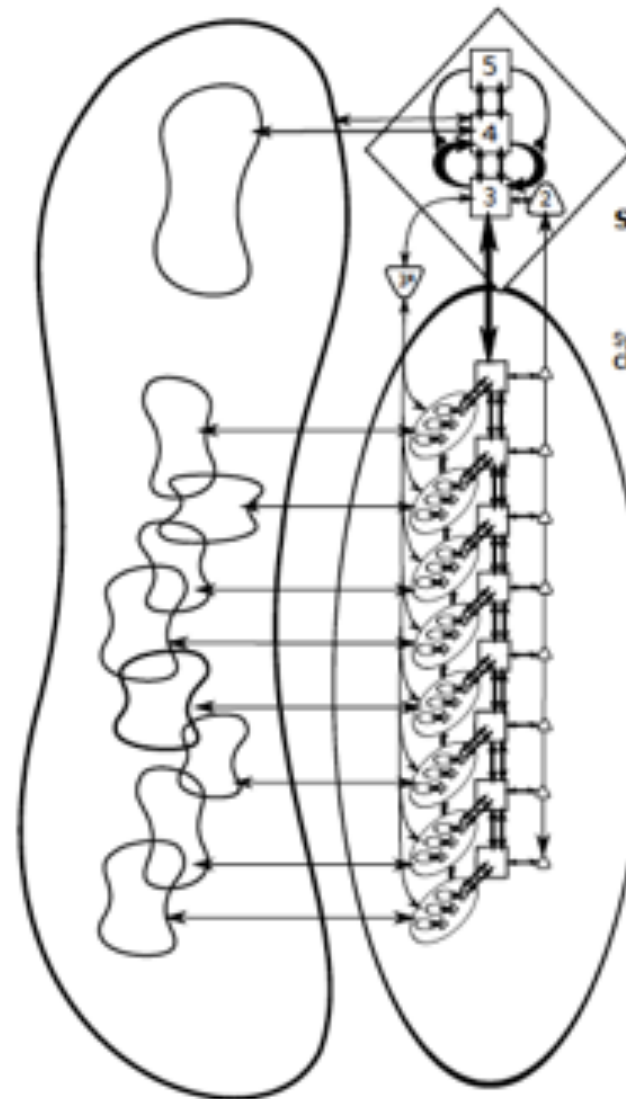
ALDO CAÑO PIEDRA
ALDO OCTAVIO
ALDO HOAJI
ALDO JORGE
COMUNIDAD UTUYA

No me importa la época... hacemos como nos da la gana...
Somos gobierno propio...





**System in Focus :
Medium Community
Upper PPR.**



System 5 : Kubu. Eco-calendar. Hee Yaia Ketu Oka
Diag. Points : D8

System 4 : Kubu. Life plan
Diag. Points : D4, D7

System 3 : Captain. Malakero. Malakera. Mingas.
Diag. Points : D9

System 2: Mingas. Community events. Values. Recorrides

System 1(a) Meta-system: Yabica "Seed Mother"
Chagra Diagnostic Points : D3

System 1(b) Meta-system: Men
Hunting/gathering

System 1(c) Meta-system: Parents/ Grand-parents
Shelter

System 1(d) Meta-system: Malokero/Malokera
Maloca Diagnostic Points : D1

System 1(e) Meta-system: Teachers / education leaders / Kubu
Education Diagnostic Points : D5

System 1(f) Meta-system: Kubu / Health leader
Health and Earth care Diagnostic Points : D2

System 1(g) Meta-system: Kubu / Malokero / Baya
Rituals Diagnostic Points : D6

System 1(h) Meta-system: Sports President
Sports and Intercultural Activities Diagnostic Points : B5 B22

Data analyses (example)

Chagra	UP (Tatuyo/Eduria)	m	D3	Lack of coordination among community members to undertake horticultural activities - clearing the soil (tumba) and 'socola'-; also for weeding and seeding activities.
	UP (Tatuyo/Eduria)	l	D10	lack of management and proper use of the soil, as some people don't have their own land and sometimes they still from those who have the land.
				They are all affected by climate change so traditional agricultural practices no longer work as effectively as they use to.
	MP (Barasano)	l	B12	There is weakness in the food productions in the chagras, which impact negatively the rituals; due to climate change impacts, it isn't possible to set fire to the chagra
			D20	Some people steal the coca leaves from other's chagras, damaging the seeds of this sacred plant.
	ACAIPi		D14	Lack of coordination among women responsible for clearing and preparing the 'chagras'.
				<ul style="list-style-type: none"> • There isn't a proper management of the chagra, as some owners are irresponsible • Some people don't have their own chagras and they steal casabe and coca leaves from others' chagras, damaging the seeds and therefore affecting the future of the chagra. • Due to climate change the traditional agricultural practices are weak now, as it isn't possible to set the chagra in fire at the right times of the year, therefore resulting in lack of casaba for the rituals. • There hasn't been continuity in government support programs: there hasn't been budget implemented for the system for indigenous communities support since 2011.
	MP (Barasano)	l	B2	Community work to prepare 'Mingas' <ul style="list-style-type: none"> o Because of difficulties coordinating, each family works independently since 2016 (Piedra Ni) o There are four neighbourhoods: the representative from each one coordinate the mingas for those families who request support to clean their 'chagras'(San Miguel)
Maloka	UP (Tatuyo/Eduria)	m	D1	People are not using the traditional building materials which affect their quality of living; there are not clear enough agreements regarding collective building tasks (e.g. food for the builders), or about responsibilities for maintenance later on
	MP (Barasano)	l	B4	<i>Maloka's maintainance: In Piedra Ni, San Luis y Tatù there isn't anyone responsible from improving the Maloka, and cleaning the common areas: the education sector pays someone to do these tasks. In San Miguel there isn't a Maloka but there is more collaboration</i>
		l	B3	Not always there is a 'malokero' (the role of the indigenous responsible for all collective activities at the Maloka); sometimes the 'Captain' performs this role without previous training so he doesn't achieve the respect of the people of the community. This results in lack of legitimate leadership, lack of community activities for preparing rituals; lack of decision making spaces and therefore lack of confidence and trust from people

Examples of diagnostic points (community)

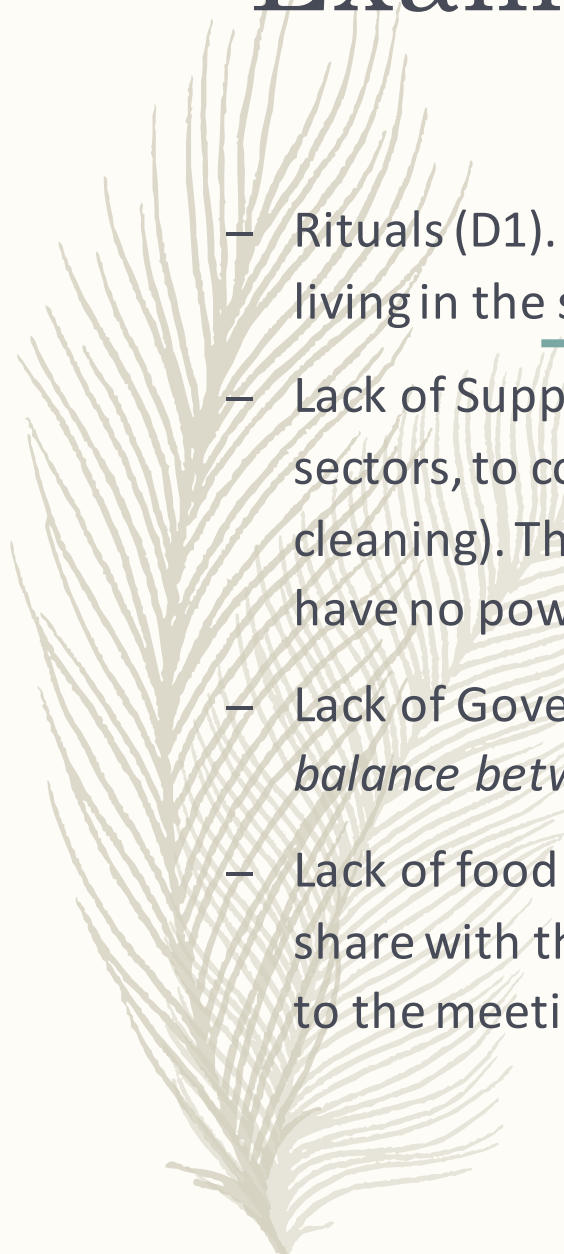
– Planning

- as there are too many people involved, they don't do joint planning to coordinate activities or projects; they only do rituals planning jointly. (San Miguel)
- no joint planning at all (San Luis)
- communities are too disparate; the traditional authorities are absent most of the time (Tatu)

– Community work to prepare 'Mingas' (D2)

- Because of difficulties coordinating, each family works independently since 2016 (Piedra Ñi)
- There are four neighbourhoods: the representative from each one coordinate the mingas for those families who request support to clean their 'chagras' (San Miguel)

Examples of diagnostic points (SSE)

- 
- Rituals (D1). Not all the young men or women are receiving the ‘Yurupari’. As all children are living in the school they abandoned the traditional ‘one year diet’.
 - Lack of Support to authorities (D2): Captains do not have the official support from other sectors, to coordinate the activities developed in the community (i.e. rituals. Dances, ‘chagras’ cleaning). The relationships between Malokero, Kubu and Captain are unclear, and Captains have no power to deal with political aspects of ACAIPI.
 - Lack of Governance (D3). The Assembly of Captains do not include the ~Kubus, so *there isn’t a balance between traditional and intercultural issues*.
 - Lack of food and resources for community rituals (D7). There isn’t enough food and ‘mambe’ to share with the community in the rituals; People don’t attend meetings or send representatives to the meetings.

VSM diagnosis (examples... community)

- Regarding Food security: The evolving social structures is leaving a serious gap regarding people's capability for self-sufficiency in food production:
 - The Chagras have traditionally been managed by women,
 - Losing the 'minga' leaves the community food security system extremely fragile



VSM Diagnosis (examples SES level)

- There are no proper mechanisms for resource negotiation (the Captain decides on behalf of the community once the resources are given to him)
- Other roles like the Rain Maker, the Dream Maker, the Seed Mother, etc. not preserved in some communities.





Summary of self governance dilemmas- community

- Traditional food production schemes should be strengthened (e.g. mingas), because in some communities there is lack of labour force to produce at the levels required by the community.
- Providing education on traditional food production in schools, could help minimize emerging food security problems and improve the diet.
- Need to re-establish respect for the Kubus, their traditions and rituals among the youth.
- Need to review the education budget and to ensure that activities such as cleaning are taken more back by the Community.
- Need to limit the use of the digital kiosk and Internet to moments of leisure and to ban them when there are other community activities need to be undertaken
- Need for more transparency in the management of community resources (e.g. education budget) by the captains.
- In order to restore the social order, it's necessary to create collective spaces for Community decision-making, where captains and traditional authorities are equally represented and empowered.
- Community members should be educated in their Life Plan and cultural identity and invited to participate in a periodic review
- New and clear mechanisms for social coexistence need to be designed: i.e. punitive or social control mechanisms for theft, blackmail, violation, lack of values.



Examples of VSM analyses of self governance dilemmas

- The resources allocated by the Colombian government – which come with associated supportive roles for the community – bring about new power structures that are not aligned with the traditional ones
- Increased variety of the external environment: the communities require, (for Requisite Variety or RV) an equivalent increase in the variety of the systems they use, to be viable in this new context
- New generations are more interested in learning about the white world and culture than in preserving the indigenous culture
- The regional governance structures lack requisite variety to make shared decisions on some of the primary community activities (chagras, hunting and gathering, traditional health and education)
- The organisational systems, rituals and values which have existed for millennia, and which have resulted in a stable, sustainable society living in balance with its natural environment are still in place but are significantly weakeretc



Discussion

- **On innovative applications of COR**
- an example of how the systemic intervention supported actors in addressing their problem situation, which empower them for fostering changes to improve their governance structures
- creatively use methods to enhance the communities' social processes on learning about their own governance structures.
- alternative way to dialogue with the indigenous, having full involvement from them: and it resulted in people's involvement with the VSM workshops, which inspired decisions about improvements in their governance structures



Discussion (cont'd)

- combine rich pictures and social cartography in the workshops, to make sure participants will be allowed to express their emotions and thoughts on their governance structures
- Further critical analyses of margins, ethics, profanity, ritual, and conflict, as described by *Midgley (2000, p. 144)* would be of great value,
- widening the agenda of the operational research community by suggesting a structured way to supporting the analysis of multi-governance issues in an extremely diverse (and divergent) multi-cultural context using an improved systemic methodology

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Images from the web

- <http://www.oronoticias.com.mx/Noticia/11/img/699d4cee51d3129db9565998eb8ff71620131114.jpg>
- https://www.google.co.uk/search?site=&tbm=isch&source=hp&biw=1220&bih=680&q=Territorio+de+los+Yaguares+de+Yurupari+Colombia&oq=Territorio+de+los+Yaguares+de+Yurupari+Colombia&gs_l=img.3...2077.11570.0.12091.47.10.0.37.37.0.114.912.6j4.10.0....0...1ac.1.64.img..0.18.925...0.aC1PvfDx9xk#imgsrc=rbqGkNvJmnprmM%3A
- <http://1.bp.blogspot.com/-iQNGESd6xYw/UNX2LI0hepI/AAAAAAAAiN0/-RzI-P4eKGM/s1600/2.jpg>
- <https://s-media-cache-ak0.pinimg.com/originals/aa/12/5c/aa125cdc726bd8a0a68dbb027ab3cd63.jpg>