

ICT-based networks as communities of practice: Past, present and future

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URL for this presentation: supras.biz/library/docs/research



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1 Background

Content

- Information and communication technology (ICT)
- Networks and networking
- Knowledge management



Information and communication technology (ICT)

- ICTs in the context of dev. cooperation include
 - Broadcasting and publishing, Computing technology, The Internet, Telecommunications
- Digital divide and development cooperation
 - Intranational and international
- Communication and culture
 - Communication essentially a rel.ship *between people*
- Data, information and knowledge
 - Information is data arranged in patterns, and knowledge is information in a cultural and social context
- Conclusion: ICTs to be understood as *means*



Networks and networking

- Origin
- Essential elements
 - Links
 - Nodes
- Network analysis
- Evolution and adaptation through ICTs



Knowledge management

- Aspects:
 - Management
 - Production
 - Organization
 - Dissemination
- Knowledge management and networks
- Knowledge management and ICTs



2 Past: Cases of networks

Content

1. CPRNet – Common Property Resource Management Network
2. FishNet – Fisheries Specialist Network

Bank networks that will not be addressed:

- ICZMNet – Integrated Coastal Zone Management Network
- IPNet – Intellectual Property Network

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2.1 CPRNet

- Rationale
 - Connect fisheries experts outside and inside the Bank. Provide learning to Bank staff on CPRs
- History
 - Founded 1995, merged with CBNRM Net in 2000
- Activities
 - Newsletter, BBLs, Coordination activities with like-minded organizations/NGOs in civil society
- Administrative
 - Membership based. Located in ENV (ENVSP), later SAR (ASTEN)



2.2 FishNet

- Rationale
 - Connect fisheries and aquaculture experts inside and outside the Bank
- History
 - Founded 1997, closed 1999
- Activities
 - Newsletter, BBLs, External website, Strategy and policy work (internally, that is, ARD; and externally with FAO), Project portfolio
- Administrative
 - Membership based. Located in ARD, an activity of the Fisheries and Aquaculture Thematic Group 

3 The present: Cases of networks

Content

1. FRAME – USAID/IRG
2. CBNRM Net – Community-Based Natural Resource Management Network

A number of other networks exist



3.1 FRAME

Program goals

- Build knowledge sharing networks
- Foster discussion on emerging trends
- Provide timely information to NRM decision-makers

Approach to knowledge management

- Generate knowledge
 - Studies, “Nature, Wealth and Power” framework
- Capture and share knowledge
 - Website, Newsletter, Workshops



FRAME website, I

- Audience
 - NRM professionals (practitioners, technical experts, decision makers), Internationally, Development community inside and outside USAID
 - Current network size: 2,500
- Content
 - Communities of practice, Discussion forums, Events, Funding opportunities, Jobs, Library, Partner pages
- Network
 - “Ask the network” features, Communities of practice, Newsletter, Sharing of ideas and resources through discussion forums



FRAME website, II

- Goals
 - Be a go-to place for NRM professionals, Foster collaborations, Give voice to NRM champions, Help disseminate new ideas, Leverage content from the network, Support outreach, communication and knowledge management
- URL
 - www.frameweb.org



3.2 CBNRM Net

Content

- History (incl. 1998 CBNRM workshop)
- Mission statement
- Organization
- Mode of operation
- Members and users
- Evaluation



History

- 1998: CBNRM workshop at the Bank
- 1998: Regional workshop in W. Africa
- 1998: Electronic mailing list for participants
- 2000: Move from the Bank to Norway
- 2000: Website (www.cbnrm.net)
- 2001: Newsletter series
- 2004: Publication series



1998 CBNRM workshop, I

- CBNRM Objectives
 - Facilitate a learning dialogue among participants from all over the world in relation to institutional reform
 - Identify and promote awareness of key institutional lessons
 - Generate information and learn about viable institutional options
 - Enhance the capacity of existing communities, networks, stakeholders and international donors to bring about positive institutional reform



1998 CBNRM workshop, II

- Themes
 - Establish an enabling policy and inst. environment, Participative process of org. effective community-based groups, Effective org. linkages between the public sector, the private sector and civil society, and Alternative approaches to conflict mgmt.
- Output
 - Plenary presentations, 20 case studies, regional working group recommendations
- Case submissions and participants
 - 450 submissions for case studies
 - Around 200 participants representing 60 countries



CBNRM Net, Mission statement

1. Realize the potential in civil society, part. approaches and trad. knowledge for managing natural resources
2. Provide a broad and unified network interface for the use of the global CBNRM CoP, emphasizing KM
3. Function as a gateway to, and clearinghouse for, all manner of CBNRM knowledge
4. Be a virtual meeting place for the growing global CoP, thus making possible easy exchange of knowledge, and through this support practical work
5. Advocate the importance of capacity building & training incl. determining the role to be played by Internet
6. Produce new knowledge, and move the agenda forward

CBNRM Net, Organization and operation

- Organization
 - Run by a Norwegian non-profit, CBNRM Networking (www.cbnrm.com)
 - Website legally owned by CBNRM Networking
- Operation
 - Content management by Supras jointly with members and other interested persons
 - Website maintained and funded by Supras

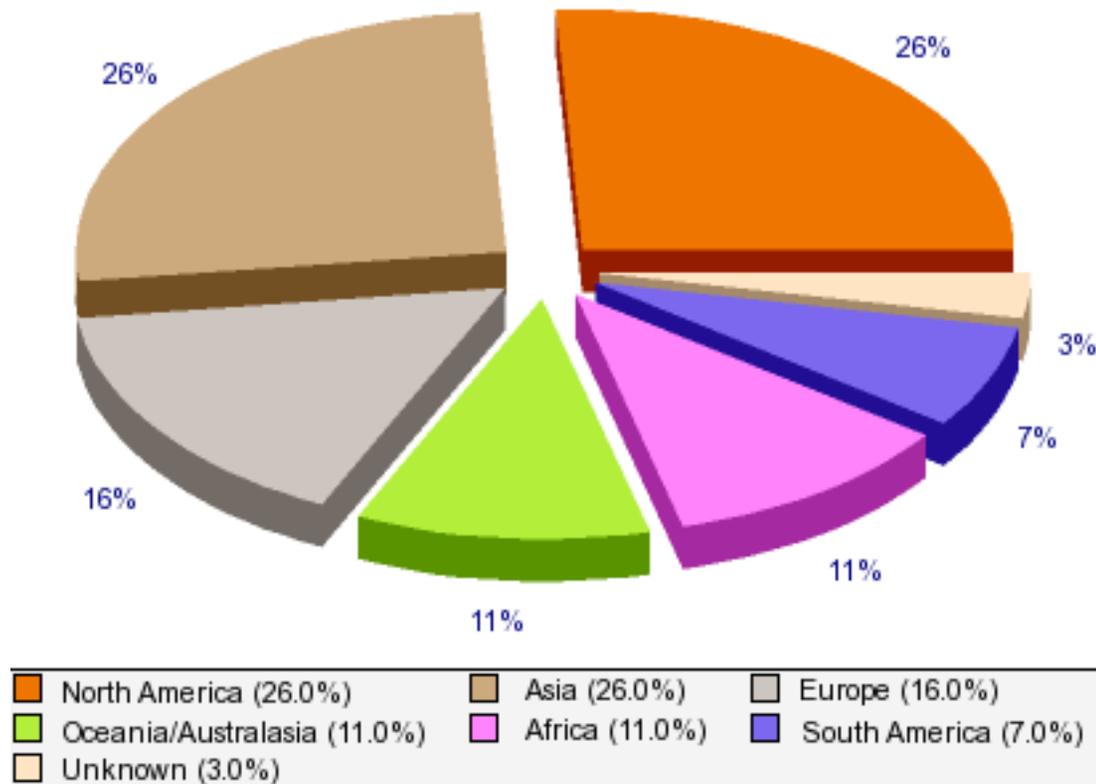


CBNRM Net, Members and users

- Members
 - Civil society, Decision makers, Evaluators, Funding agencies, NGOs, Practitioners, Project managers, Public sector, Researchers, Technical experts, etc.
 - Individuals, organizations and NGOs
 - More than 500 members living in and/or working in more than 100 countries
 - Emphasis on Africa
- Website users
 - A large number of people access the website, and receive the newsletter indirectly
 - Around 11,000-12,000 unique visitors/month (see slides 21-26 for details)

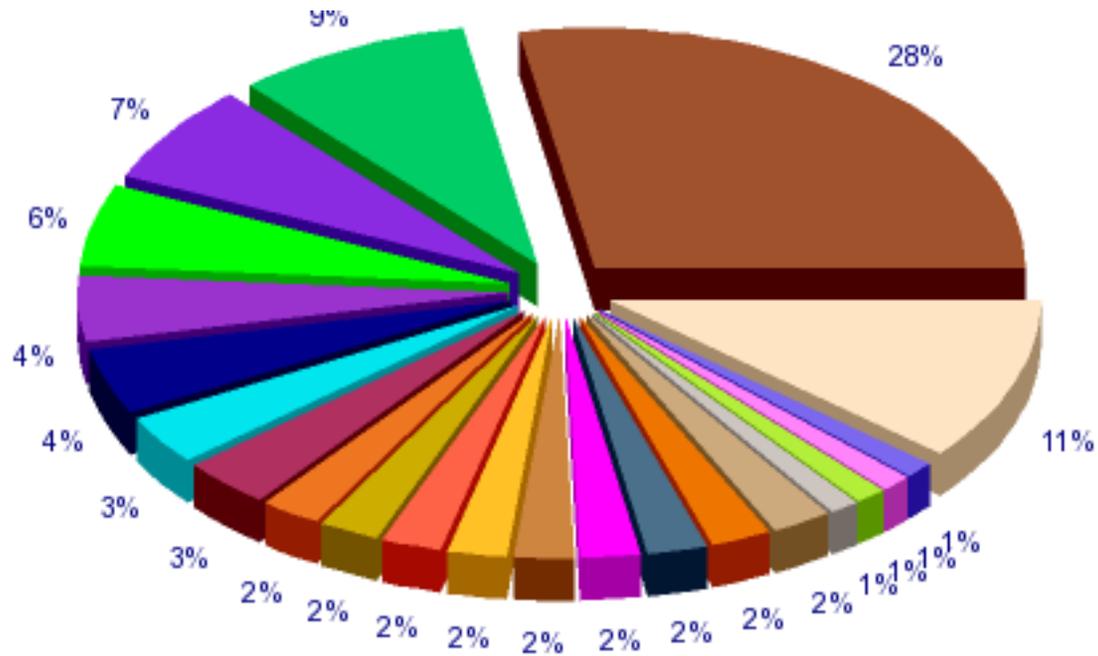


Use stats, I: Continent share



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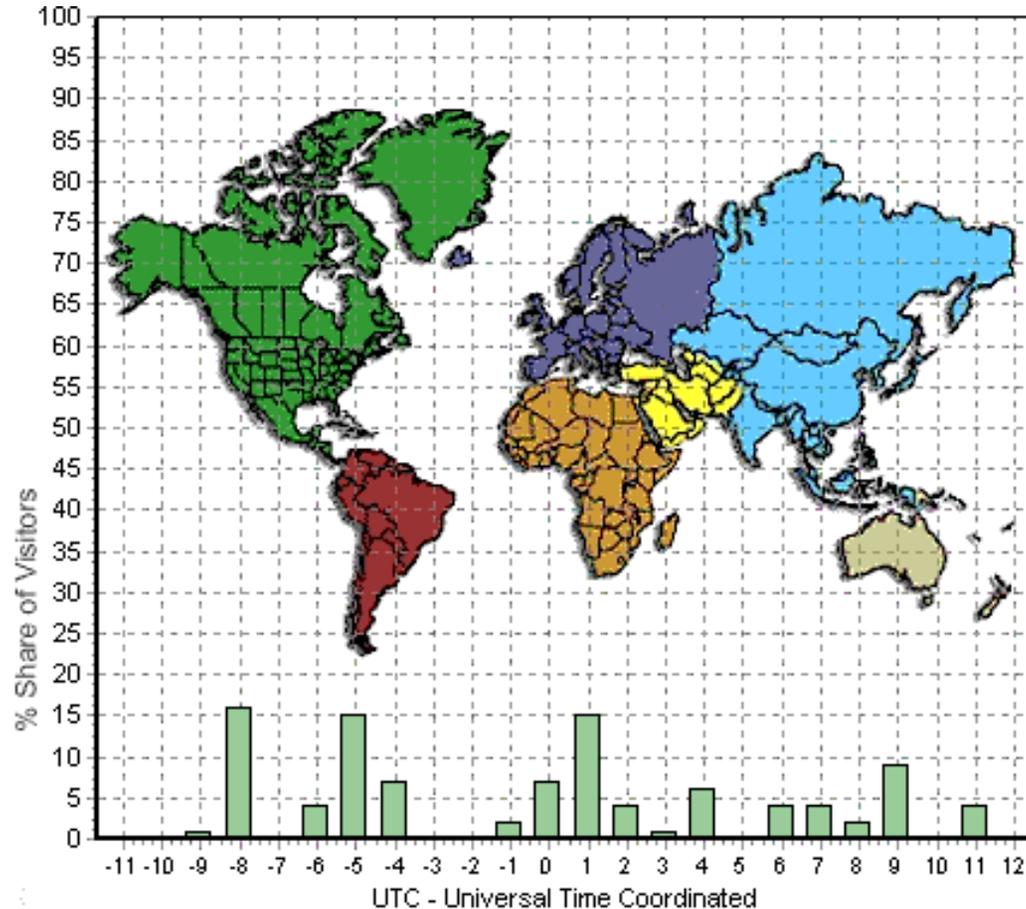
Use stats, II: Country share



United States (27.8%)	Australia (8.9%)	Brazil (6.7%)
France (5.6%)	India (4.4%)	South Africa (4.4%)
Portugal (3.3%)	New Zealand (3.3%)	U. K. (2.2%)
Vietnam (2.2%)	China (2.2%)	Ireland (2.2%)
Unknown (2.2%)	Thailand (2.2%)	Malaysia (2.2%)
Japan (2.2%)	Philippines (2.2%)	Satellite Provider (1.1%)
United Arab Emirates (1.1%)	Burundi (1.1%)	Peru (1.1%)
misc. (11.1%)		

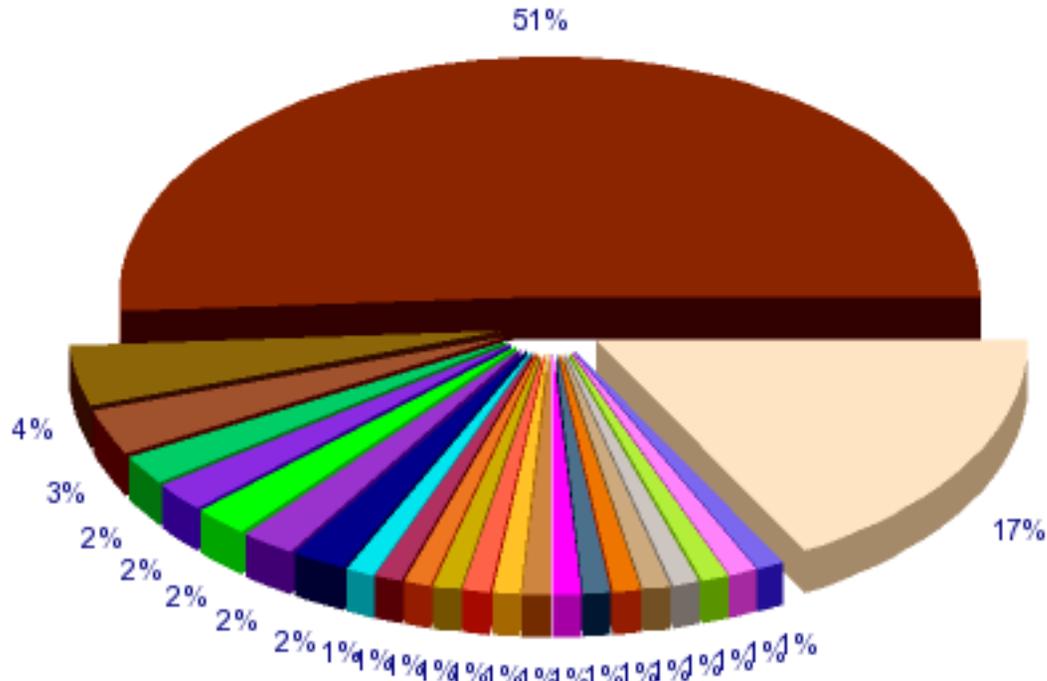
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Use stats, III: Time zone share



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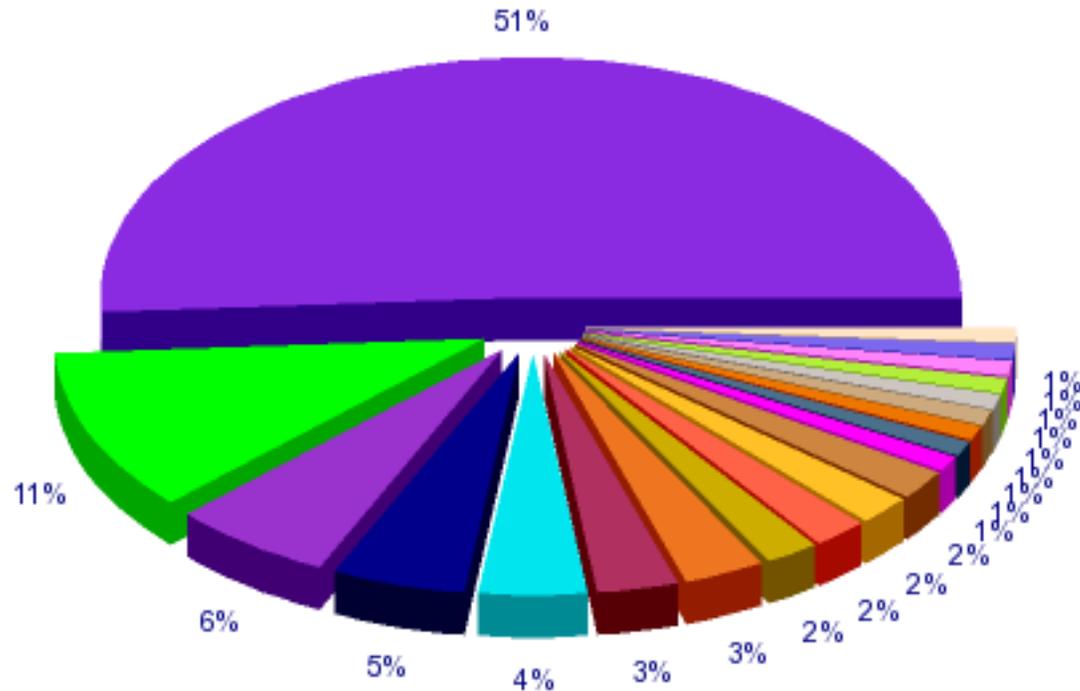
Use stats, IV: Domain tracking



Only IP Address (51.0%)	worldbank.org (4.0%)	comcast.net (3.0%)
tuat.ac.jp (2.0%)	msi.net.au (2.0%)	cox.net (2.0%)
callplus.net.nz (2.0%)	vsnl.net.in (2.0%)	bsnl.co.in (1.0%)
CCOM.NET (1.0%)	archive.org (1.0%)	optusnet.com.au (1.0%)
af.mil (1.0%)	edu.au (1.0%)	fpt.vn (1.0%)
gaoland.net (1.0%)	gu.se (1.0%)	itacaddis.org.et (1.0%)
ji-net.com (1.0%)	accesskenya.com (1.0%)	netvisao.pt (1.0%)
csulb.edu (1.0%)	telone.co.zw (1.0%)	misc. (17.0%)

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Use stats, V: Organization tracking



Only IP Address (51.0%)	Network (NET) (11.0%)	Organization (ORG) (6.0%)
Commercial (COM) (5.0%)	Australia (AU) (4.0%)	India (IN) (3.0%)
New Zealand (NZ) (3.0%)	Educational (EDU) (2.0%)	Japan (JP) (2.0%)
Portugal (PT) (2.0%)	South Africa (ZA) (2.0%)	Zimbabwe (ZW) (1.0%)
Peru (PE) (1.0%)	France (FR) (1.0%)	Ethiopia (ET) (1.0%)
Sweden (SE) (1.0%)	Viet Nam (VN) (1.0%)	Canada (CA) (1.0%)
Brazil (BR) (1.0%)	Military (MIL) (1.0%)	

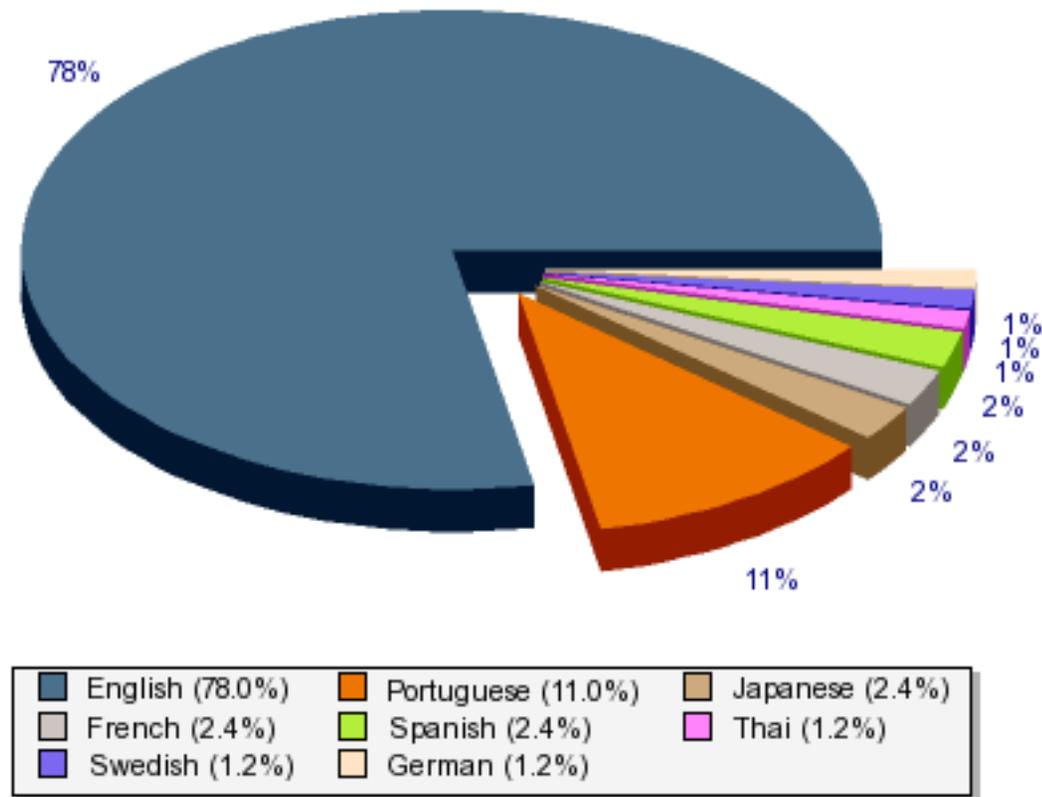
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Use stats, VI: Language tracking



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4 Conclusions

General

- Geographic spread
- Knowledge management
- Emphasis on a limited no. of ICTs
- ICTs used to communicate in virtual networks needs to be problematized
- ICTs cannot replace face-to-face interaction
- Little south-south knowledge sharing
- Human made boundaries remain
- Knowledge is power
- Websites need to be simple



Conclusions, II

CBNRM Net

- Opportunities and incentives
 - Cost-effective, Low budget, Low overhead, website model easy to implement and use (but should be upgraded to an open source scaleable CMS)
- Constraints
 - Requires a focused topic, Dependent upon one or a few dedicated sponsors (in the West or the South)



5 Modeling ICT-based networks as CoPs

Content

1. Network
2. Community of practice
3. Modeling



5.1 Network

Three issues

- Network and ICTs
- Network vs. CoP
- Network vs. website



5.2 Community of practice

- Some key aspects
 - Members have shared interests and are motivated to address them, Often self-generating, Membership self-selecting, Members co-located or dispersed
- An early definition
 - A set of relations among persons, activities, and world, over time and in relation with other tangential and overlapping CoPs (Lave and Wenger 1991)
- Network vs. CoP
 - Above no clear distinction between the two
 - Difference: “Network” refers to the *form* and *structure*, while “CoP” refers to the *content* and *function*



Community of practice, II

- A recent definition
 - Address the problems with knowledge that cannot be quantified. CoPs provide an environment for people to develop knowledge through interaction with others in an environment where knowledge is created, nurtured and sustained (Hildreth and Kimble 2002)
- An additional key aspect
 - Strong focus on knowledge management **SC**

5.3 Modeling

Two levels of analysis:

1. The network (network analysis)
2. The network in society (political-economical analysis)
 - Applies specifically to networks located in or covering also borrowing countries

Modeling: Network analysis, I

Descriptive variables

- *Administration*: Funding, Membership based or not, Mgmt. structure, Organization, Website architecture
- *Focus*: Concerned with knowledge mgmt., Emphasis on knowledge or data, Emphasis on political-economical dimensions, Geographic, Thematic
- *ICTs*: Concerned with using a broad suite of ICTs, Hard/soft-ware and connectivity, Technical insight expected by users

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Modeling: Network analysis, II

Processual variables

- *Structure*: Centrality, Clustering, Density, Flexibility, Size
- *Interactions*: Directional flow, Duration, Frequency, Multiplexity, Transactional focus
- *Other*: Openness



Modeling: Political-economical analysis

- Variables characterizing relations between network and society
 - Directional flow, Duration, Frequency, Multiplexity, Transactional flow
- Societal context variables
 - Decentralization, Devolution, Digital divide (domestic), Equity, Political system, Position of ICTs, Transparency
- Enabling strategies
 - Power and empowerment
 - *Enabling factors*: Capacity-building, Infrastructure, Policy, Regulation / Legal reform

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6 Future: ICT-based networking and “Web 2.0”

The brainstorming will proceed based on this background

- Goals
 - Poverty alleviation, Sustainable development
- Challenges
 - Knowledge management and knowledge sharing
 - Digital divide: North/south & domestically
- Means
 - ICTs: Traditionally and in “Web 2.0”



Web 2.0

Refers to an anticipated second generation of web-based communities and hosted services

Key principles of Web 2.0 applications:

- Architecture of participation, Data as driving force, Network effects, User-friendly interface based on e.g. Ajax, Social networking aspects, Web as platform

Available technologies include:

- Blogging, Chat, Clean URLs, CSS, Discussion groups, Email, File sharing, Messaging, Podcasts, RSS/Atom, social bookmarking, sem. HTML, Tags, Video, Voice chat, Wikis

The Bank

Substantial experiences with using ICTs. Building upon these, the following should be emphasized:

- Understand the incentives – as well as the constraints – that affect the use of ICTs
- Understand the potential for ICTs to serve as key drivers in improving effectiveness of operations

Proposed key overarching approach: The sustainable livelihood framework



A next step: Resources on ICT-based networks

Resource page on ICT-based networks:

- URL: supras.biz/knowledge/topics/networks.html

1. Networks and links

- Further networks to be added

2. Documents

- Documents pertaining to these networks, and to networks, networking and analysis of networks in general
- Further documents to be added

