

Health, Biodiversity and Traditional Medicine – Strengthening Linkages for Community Health

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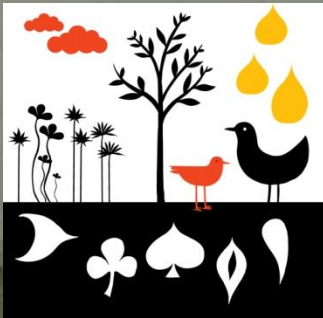
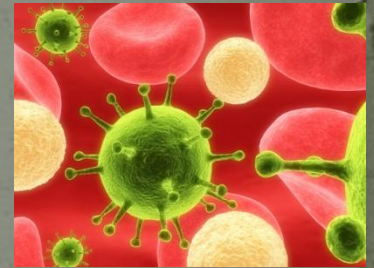
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"Health is not a commodity that is given. It must be generated from within. Health action should not be imposed from the outside, foreign to the people; it must be a response of the communities to problems they perceive, supported by an adequate infrastructure. This is the essence of the filtering inwards process of primary health care."

Dr. Halfdan Mahler, Former Director General of WHO

What is Biodiversity

Biodiversity is defined as the the variability among living organisms from all sources, including, 'inter alia', terrestrial, marine, and other aquatic ecosystems, and the ecological complexes of which they are part: this includes diversity within species, between species and of ecosystems" (Convention on Biological Diversity, 1992).



Ecosystem services

- Provisioning: products obtained from ecosystem
(food, fuel, fibre, medicine, genetic resources)
- Regulating: benefits from the regulation of ecosystem processes
(air quality, climate, water, erosion, water purification, disease and pests, pollination, natural hazards)
- Cultural: non-material benefits
(spiritual, aesthetic, knowledge, education, social relations, identity)
- Supporting: necessary for the production of all other ES
(eg., soil formation, nutrient and water cycling, photosynthesis)

Health

- Health is a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity.(WHO, 1946)

Biodiversity and Health

- “Human beings are an integral, inseparable part of the natural world, and that our health depends ultimately on the health of its species and on the natural functioning of its ecosystems”

[Sustaining life, 2008, (U.N. (CBD Secretariat, UNEP, and UNDP) and the International Union for the Conservation of Nature (IUCN)]

Elements of the Link

- Regulation of infectious diseases
- Research - for understanding physiology and human pathology, efficacy
- Natural products (a major source of ideas and compounds from plants, animals, and microbes)
- Primary healthcare through local flora and fauna
- Nutritional security (e.g. Iron deficiency anaemia)
- Healing landscapes – recreational, spiritual dimensions

Regulation of Infectious Diseases

- Ecosystem disruption and the loss of biodiversity have major impacts on the emergence, transmission, and spread of infectious diseases – e.g. Malaria, etc.
- 36 new emerging infectious diseases, since 1976, many of which are the direct influence of landscape on the ecology of disease (Taylor *et al.* 2001)
- Controlling the emergence and spread of infectious diseases by maintaining equilibrium among various elements of nature

Medicines from Nature

- Pharmaceuticals - over 50% of all pharmaceuticals of last 25 years are directly derived from or modeled after natural compounds (Newman & Cragg 2007).
- Molecules – of the 155 small molecules of last seventy years, 73% are 'non synthetic', 47% either natural products or directly derived there from (Newman and Cragg 2007).
- Various important drugs - Aspirin, Quinine, Morphine, Artemisinin, Taxol, Vincristine/vinblastine etc.
- 119 pure chemical substances extracted from higher plants are used in conventional medicine. Of this, 74% of the chemical compounds have the same or related use as in folk knowledge (Farnsworth et al. 1985).

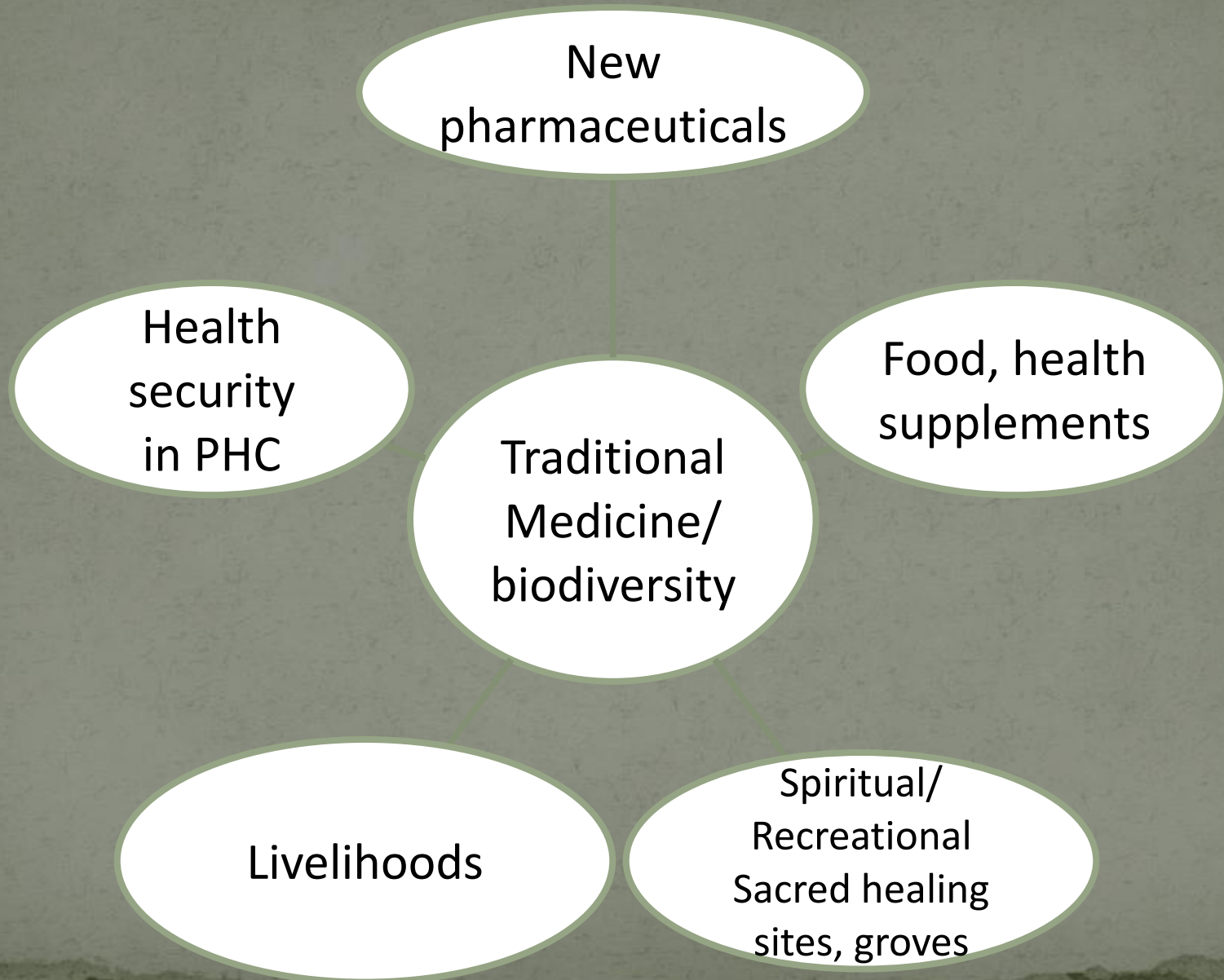
A Health Sector Paradox

- Immense advances in human well-being coexist with extreme deprivation in many parts of the world (World Health Report 2006), Importance of PHC (WHR 2008)
- One third of the global population has no regular access to minimum healthcare (Bodeker *et al.* 2005).
- Areas with no modern health care facilities are abundant in natural resources and traditional medical knowledge
- Resource rich, practice poor situation

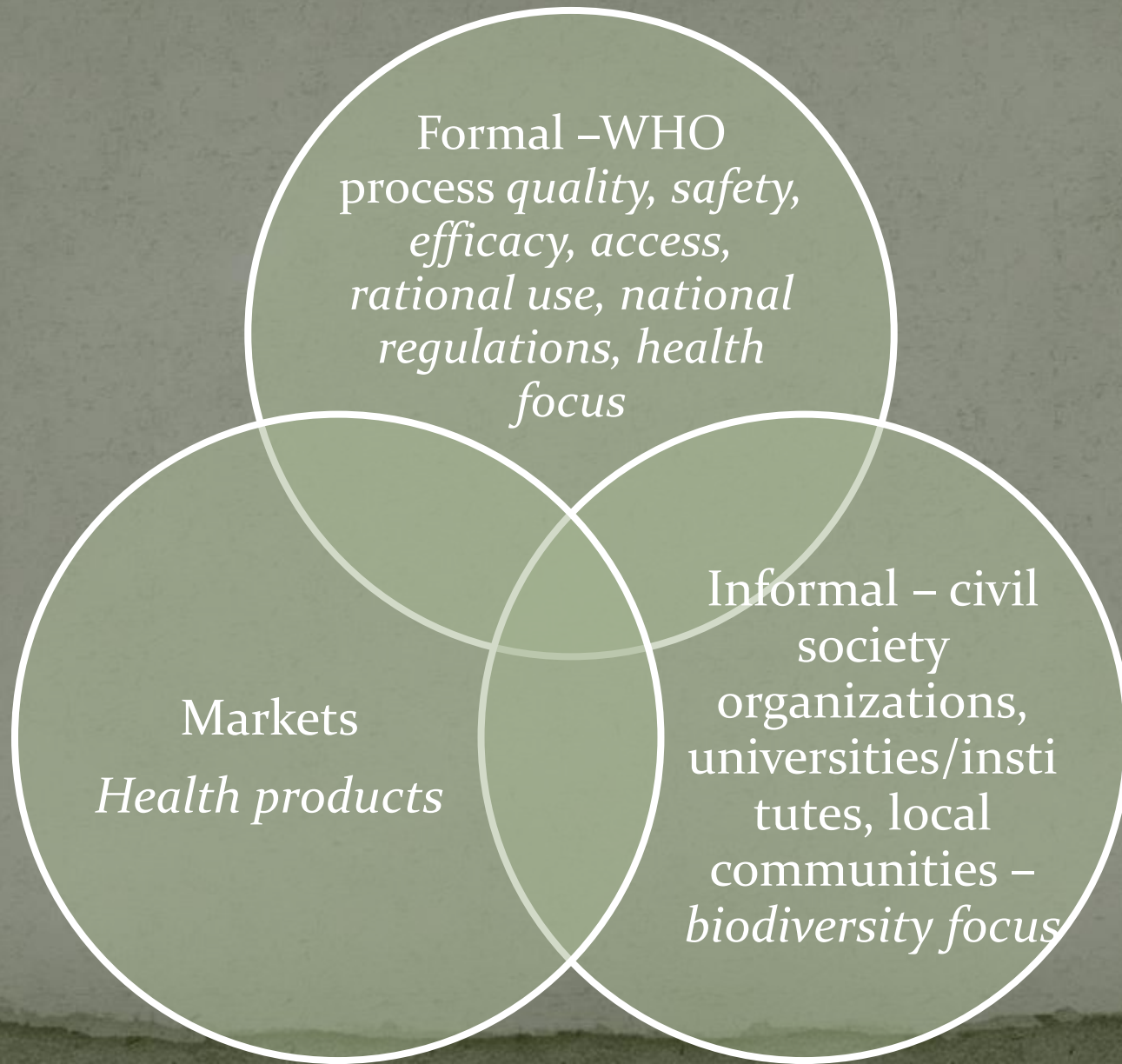
Traditional Medicine and Relevance

- Traditional medicine (WHO 2000): is *'the sum total of the knowledge, skills and practices based on the theories, beliefs and experiences indigenous to different cultures, whether explicable or not, used in the maintenance of health, as well as in the prevention, diagnosis, improvement or treatment of physical and mental illnesses.'*
- Estimates suggest high continued use around the world (WHO 2008)
- Inherent relationship with bio-cultural diversity- diverse, ecosystem and often community specific
- Highly relevant in the context of primary healthcare as it is available, accessible, affordable, culturally accepted

Aspects of Relevance



Traditional Medicine Integration: Three Processes



Basis of arguments

Health, biodiversity and TK nexus in community health – multilateral perspectives, policies, guidelines



Collection of data on global initiatives, networks, field programs



Analysis of case studies



Identification of critical themes/issues related to the area and policy gaps

Policy Context: Biodiversity, TK and Community Health

- Alma-Ata (1978) – integration of traditional medical knowledge and health practitioners
- Chiang Mai (1988)- “saving the plants that save lives”.
- Agenda 21 (1992) - Appropriate integration of TRM in national health systems; research into TK preventive and curative health practices
- WHO (1995, 2002-2005, 2008) - Safety, Efficacy and Quality, Access and Rational use, National regulations

Policies – Ecosystem, Health and Wellbeing

- UNHCHR (2000), right to highest attainable standard of health – States have “obligation to refrain from prohibiting or impeding traditional preventive care, healing practices and medicines.”
- UNEP-IISD (2004) - Ability to use traditional medicine is one of the 10 resources of wellbeing
- COHAB (2007) - Well-being and health care needs through the conservation of biodiversity and associated TK systems

Conservation of Natural Resources & Protection of TK

UNCTAD - protection of TK and promoting trade and development opportunities for developing countries through traditional medicine.

CITES - Sustainable use of natural resources by monitoring trade of endangered species of flora and fauna.

FAO- NTFP, medicinal plants policy, conservation and research

UNIDO- industrial use of medicinal plants, improved technologies for standardization, and supporting capacities of member countries.

WIPO - IPR protection of traditional medical knowledge.
Sui generis model (with UNESCO 1982)

The Commonwealth Secretariat, EU, World Bank and WTO policy guidelines on traditional medicine.

Cultural Heritage, Indigenous Rights, Development

- Indigenous and Tribal Peoples Convention (ILO); Convention for the Safeguarding of Intangible Cultural Heritage (2003); UN declaration on the rights of indigenous peoples (UNPFII, 2006)
- UNESCO, 2005 – positive contribution of TK to sustainable development [....] need for protection and promotion

Knowledge Systems, Education, Research

- UNESCO-ICSU - Declaration on Science and the use of TK
- UNDESD - Indigenous learning approaches and transmission of TK, social learning, reflexive learning in development
- IPBES – assessment of changes to biodiv and ecosystems – attempting to integrate TK in mainstream knowledge for assessment

Convention on Biological Diversity (CBD)

- CBD - calls for conservation, sustainable use and ABS
- COP 5 - Medicinal plant bio-enterprise to sustainable development , intellectual property rights, access and benefit sharing
- COP 10 – Affirms the need to identify and strengthen priorities on biodiversity and health between relevant institutions and national agencies dealing respectively with public health and environmental resources
- Community protocols as part of international regime on ABS

Initiatives – Health, BD and TRM

COHAB -
Convergence
between CBD and
WHO

Ecosystems and
human wellbeing –
Health synthesis
WHO report – MEA

Harvard report –
Biodiversity: its
importance to
human health

UNESCO-SCOPE-
UNEP – Biodiversity,
health and wellbeing

Role of biodiversity in
healthy ecosystems in
supporting child health
(EI)

UN Resolution on
'Harmony with
Nature'

Indicator (s) on the
Health & Well-being
of Communities
Directly Dependent
on Local Ecosystems

Inadequate focus on
community health through
TK

Major International Organizations/Initiatives

- UNDP – GEF - CCF
- DANIDA
- IUCN, WWF, TRAFFIC, BGCI
- Satoyama initiative
- International Cooperative Biodiversity Groups (ICBG)

- FORD foundation
- IDRC and CIDA
- Equator Initiative
- SEED (UNEP, UNDP & IUCN)
- Rainforest alliance

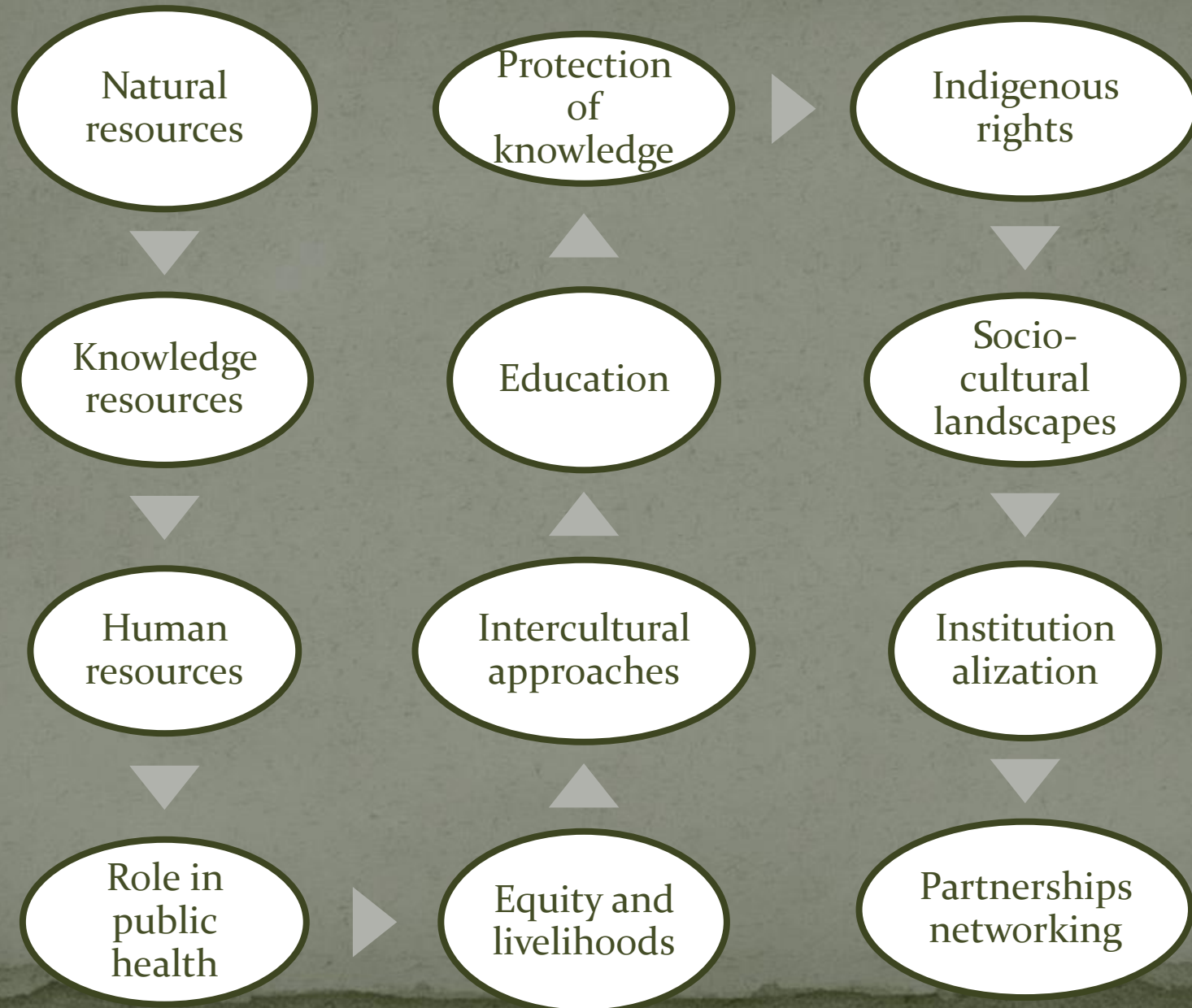
- GEF- SGP
- ETC-Compas

- COHAB
- JICA
- Nippon foundation

- Christenson fund
- Toyota foundation

- UN-DESD

Key Themes



Natural Resources

Context

- 50,000 - 70,000 plants used as medicine, 3000 are traded; 21 % are endangered (Schippmann et al. 2006).

Interventions

- Guideline on Conservation of medicinal plants-WHO/IUCN/WWF (1986). Good Agricultural Practices Guidelines

Policy

- National inventory of medicinal resources, threat status, trade status
- Community based participatory models of conservation, biodiversity registers, community protocols, encouraging cultivation

Case studies

- Rapid threat assessment (CAMP), insitu/ex-situ conservation models, sustainable harvest

Knowledge resources

Context

- Some knowledge is codified, even institutionalized, much in oral form-in public or private domains, level of expertise heterogenous, Internal methods differ despite underlying epistemological coherence, natural product development is time consuming, resource intensive

Interventions

- Participatory assessment methods- reflexive learning process

Policy focus

- Community level assessments, intergenerational transfer, interdisciplinary ethno botanical studies based on community needs

Case studies

- DALHT, Tramil model, Observational clinical studies

Human resources

Context

- Between 60-70% of child deliveries are done by untrained birth attendants, high population to healer ratio, diverse specialty areas, social legitimacy – no legal recognition, Selective use

Interventions

- Organizing, self regulatory systems, accreditation systems

Policy Focus

- Integration of THPs, recognition and support as per local needs, self regulation, referral systems and better relationship with health professionals, access to resources, protection of IPRs, collection of good practices and upscaling

Case Studies

- MPCN healers model, Prometra Healers Training, Srilankan healers network

Public Health Practices

Context

- Several field level models of community health
- Inadequately explored in national programs
- Issues of quality, safety, efficacy, access, rational use

Intervention

- Identification, assessment and promotion of public health practices

Policy

- Mainstreaming, research and education

Case studies

- Home Gardens, HIV, Malaria, Anaemia, Okinawa food study, Haichi system, Thai-Burma border refugee program, water related practices

Equity and Livelihoods

Context

- Rural poverty of source providers - Iniquity in supply chain
- Resources – To achieve development objectives in local communities
- Equitable income result in better conservation, health outcomes
- Initiatives short lived – technological challenges, supply-demand
- ABS models – few beyond rhetoric

Interventions

- Good manufacturing practices and certification
- Collection and sale of NTFP, cultivation of medicinal/ nutritional resources, semi-processing, small scale production of medicines and related health products, capacity building at various levels

Policy Focus

- Community based enterprises, ABS implementation

Case Studies

- Local enterprises (GMCL), Access and benefit sharing

Intercultural Approaches - Education, Research

Context

- Differing worldviews and ways of understanding; TK is often informal, secret and sacred, spiritual, time related and non-linear in nature
- Methods are also subjective, intuitive and experiential
- Challenges in validation, creation of universal standards
- Pluralistic existence and appropriate integration

Interventions

- Integrative transdisciplinary approaches to research, education

Policy

- Education within the traditional medicine community, orientation of health professionals, appropriate research models

Case Studies

- Integrated Hospitals, CAPTURED transdisciplinary models

Protection of Knowledge

Context

- Delineating between prior art and innovation
- Reducing natural product exploration
- Ensure easy and free access to knowledge, social equity
- To be promoted as active social traditions

Interventions

- Databases, community knowledge registers, biocultural protocols

Policy

- Community sensitive methods for protection, at the same time allowing innovation and practice as active social traditions

Case Studies

- TKDL, Community knowledge register, biocultural protocols

Partnerships and Networking

Context

- Strong partnerships are built between local civil society organizations, communities, educational institutions, scientific establishments, private sector, multilateral organizations and other relevant stakeholders
- National or International recognition spurs scaling up processes of community activities

Interventions

- Several programs and networks

Policy focus

- South-South cooperation, international networking, learning exchanges

Case Studies

- SGP, Compas, Equator initiative, Asia-Pacific Traditional Medicine and Herbal Technology Network (APTMNET-UNESCAP)

Reflections

Popular subject
in the 1990s –
lack of innovative
ideas?

Success pilot
models, but scale of
operation not
enhanced

Failure of
PHC agenda
(health for
all by 2000)

Pluralistic
approaches not
reflected in
processes such as
MDGs

National
programmes -
market oriented

Can community
assessments be
standardized/univ
ersalized?

Inadequate
attention to
synergies in
implementation

Need for
public and
private
sectors and
civil society

Inadequate
financial
allocation?

Back to health
access, barefoot
doctors ? a
rightful place for
TK?

WHO yet to
provide
comprehensive
guidelines for an
integrated
community
health approach
of TRM

At Local Level

Community health – cost efficiency approach (supplementing with community resources) vs. self help approach (empowerment)
.Focus on former

Difficulties in local integration – health professionals were an impediment

Not at the cost of basic needs, Assessment is most important

What does it mean to say community health today? Public health, population health – technical and institutional capacities?

Involvement of local communities - *in conservation and resource management rather than improvement of local health*

Governance issues at local level – forest departments, NTFP collectors, traders, industries

Protection focus – not promoted as active social traditions or intergenerational transfer of such knowledge

Biodiversity and Community Health (BaCH) Initiative



UNITED NATIONS
UNIVERSITY

UNU-IAS
Institute of Advanced Studies



TRAFFIC
the wildlife trade monitoring network



EQUATOR INITIATIVE



पुरुषोऽयं लोकसम्मितः



Convention on
Biological Diversity



Afro-Asian Regional Exchange – Prometra, Uganda
Healer -Naiga explaining her personal experience in using medicinal plants



Thank you very much !