HUMAN HEALTH
BUILDING STRONGER UNIVERSITIES IN DEVELOPING COUNTRIES

Research proposal writing workshop

Kicking off a discussion on the proposal writing process

Peter Furu

Department of International Health, Immunology and Microbiology

University of Copenhagen

KCMC, Moshi
8-12 October 2012

"Defining a research problem is the fuel that drives the scientific process and is the foundation of any research method and experimental design from true experiment to case study"

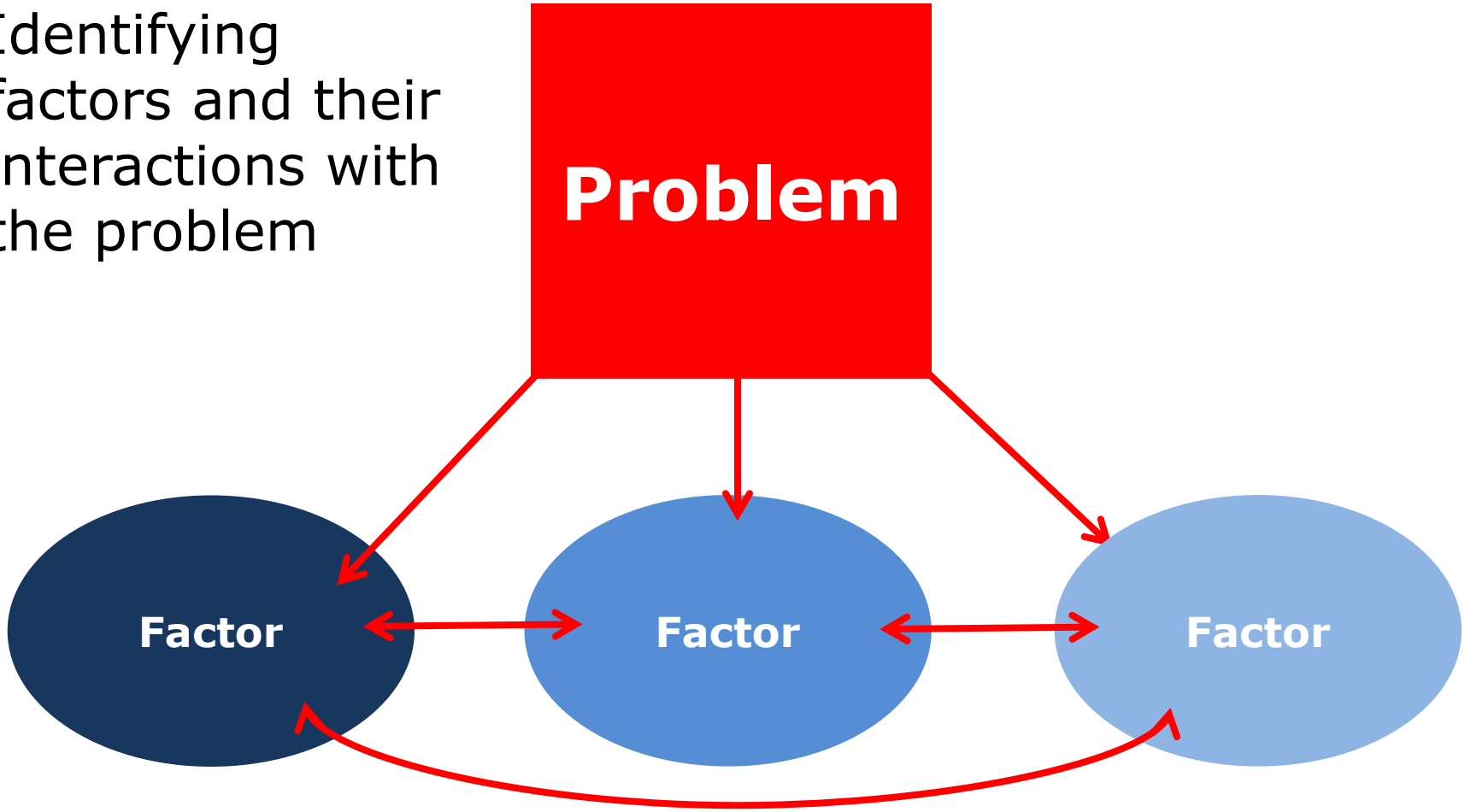
Shuttleworth, 2008

Problem analysis

Before writing the proposal

Problem analysis

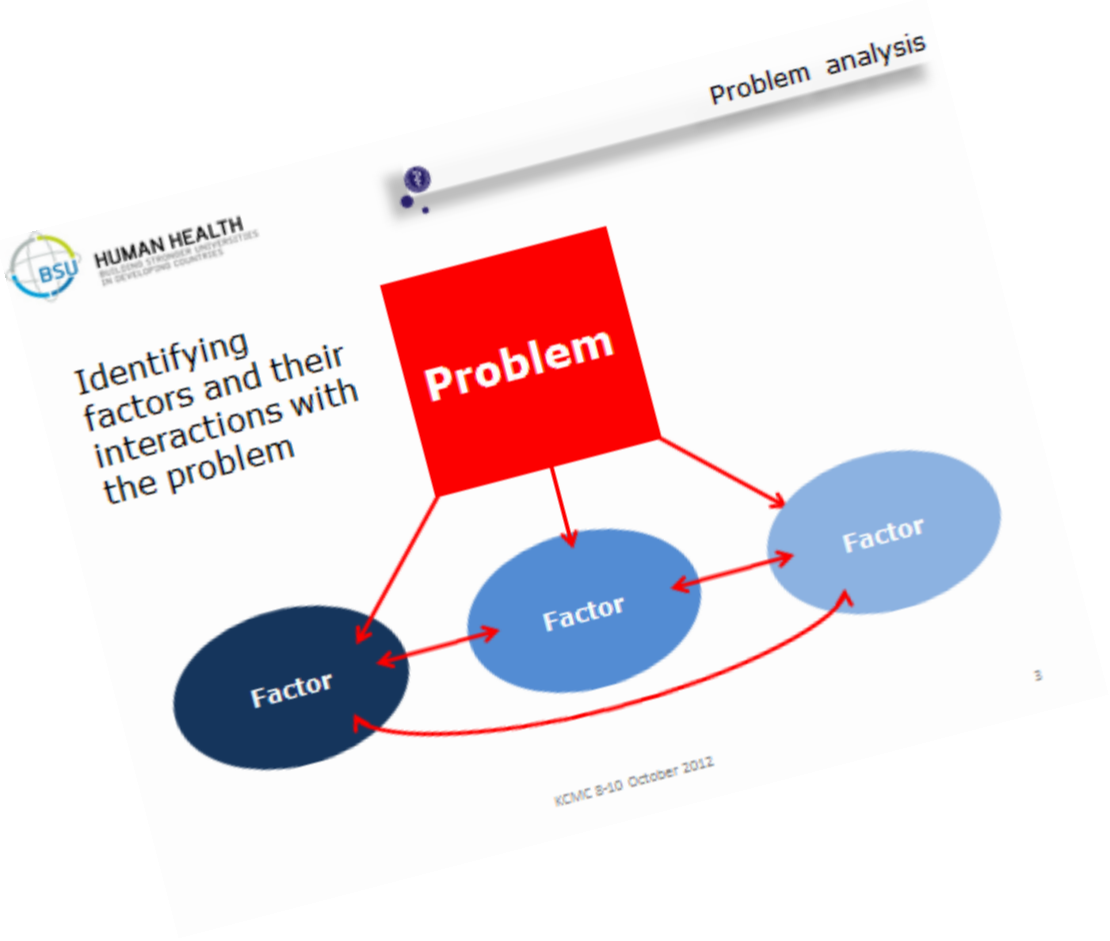
Identifying factors and their interactions with the problem



Before writing the proposal

Problem analysis

Stakeholder identification

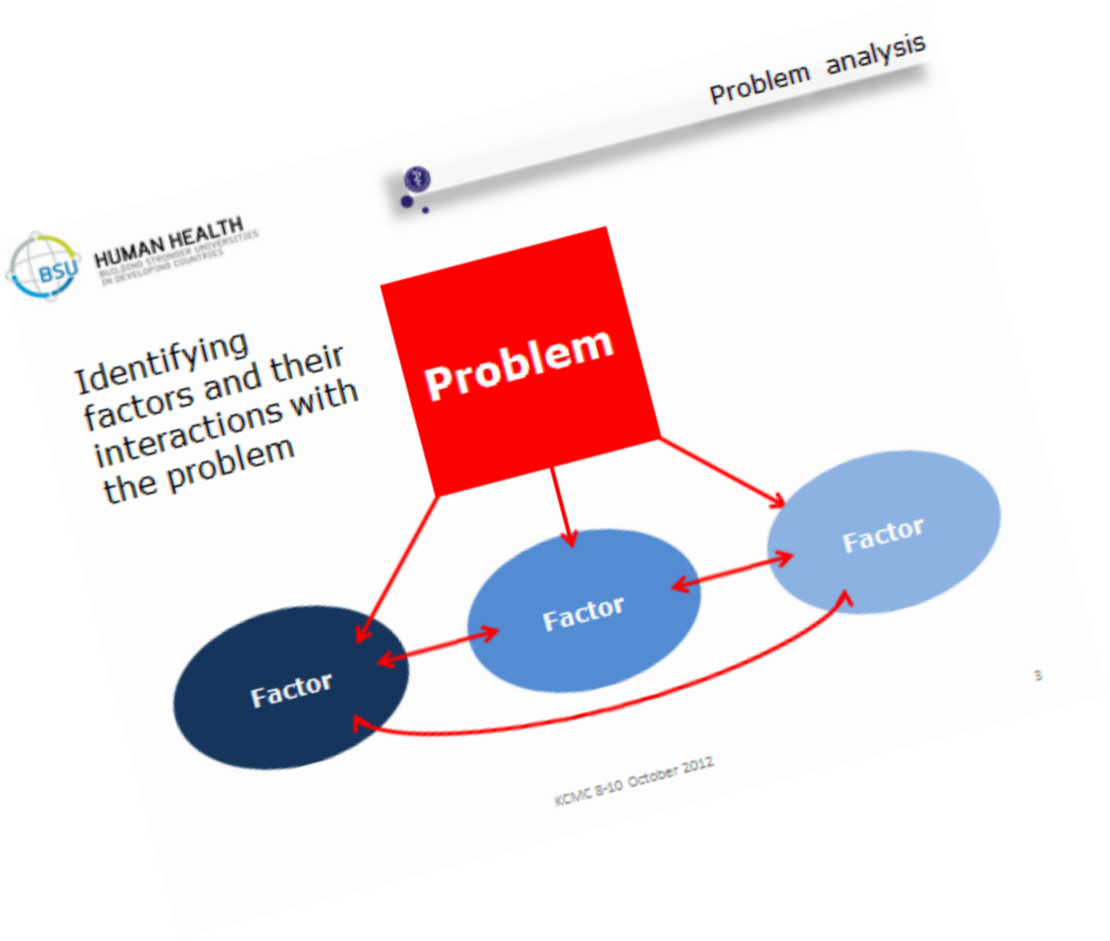


Reflection !

Who are involved in problem identification and analysis ?

Before writing the proposal

Problem analysis



What is the problem ?

What are the factors ?

Example of a problem

Increased environmental health burden of water related diseases in Southern Africa

Climate change/variability
Increased rainfall
Increased temperatures
Increased drought and water scarcity
Increased flooding
Increased vector-breeding potential
Increased environmental pollution
Insufficient sanitation facilities
Poor drainage systems
Contamination of drinking water
Loss of medicinal plants
Increased environmental health burden of water related diseases in Southern Africa
Degradation of biodiversity
Decreased air quality
Poor waste disposal systems
Excessive use of agro-chemicals
Haphazard industrial development
Poor immune status
Unreliable environmental impact assessments
Poor nutritional status
Economic decline
Poor accessibility to health services
Inadequate health infrastructure and capacity
Low disaster preparedness
Insufficient training of health work force
Unstable drug delivery
Weak health education
Poor governance
High illiteracy
Gender imbalances
Inappropriate cultural beliefs and practices
Lack of prior community consultations/involvement
Poor knowledge on hygiene
Increased food shortages
Poverty
Weak water policies

Categories (1)

Climate change/variability

- Increased temperatures
- Increased rainfall
- Increased flooding

Environmental

- Degradation of biodiversity
- Loss of medicinal plants
- Insufficient sanitation facilities
- Decreased air quality
- Increased vector breeding potential
- Increased environmental pollution
- Poor drainage systems
- Excessive use of agrochemicals
- Contamination of drinking water

Governance/institutional

- Haphazard industrial development
- Unreliable environmental impact assessments
- Inadequate health infrastructure and capacity
- Insufficient raining of health workforce
- Weak health education
- Poor accessibility to health services
- Weak policies (health, water, environment)
- Weak waste disposal systems
- Unstable drug delivery
- Low disaster preparedness
- Lack of prior consultations/involvement
- Weak legislation and enforcement

Categories (3)

Socio-economic

- Poverty
- High illiteracy
- Gender imbalance
- Increased food shortages

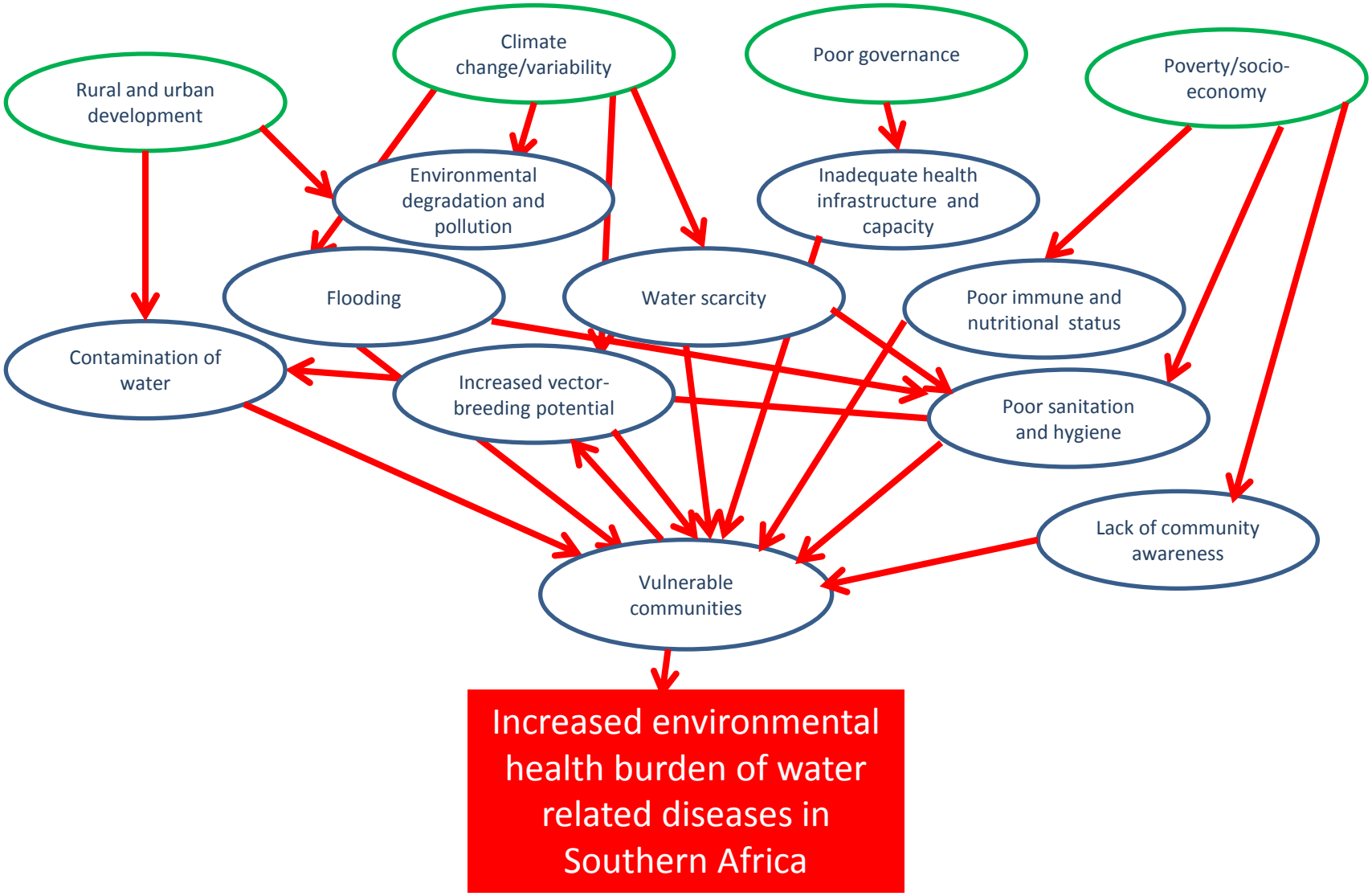
Biological

- Poor immune status
- Poor nutritional status

Behavioral

- Inappropriate cultural beliefs and practices
- Poor knowledge on hygiene behaviour

Before writing the proposal
Conceptual framework



Eventually the formulation of a **problem statement** should reflect the **context and focus** of the chosen research area and at the same time state the **significance and justification** of the project

It will provide a frame for the expected results, conclusions and possible recommendations

Reflection !

What are then the next steps in the proposal development process ?

One next step is:

Literature review – developing background

Reflection – again !

What do you see as the main generic content and characteristics of the Background section ?

Writing the proposal

Background/literature review

- Close link to problem statement
- Explaining the scientific and technological aspects of the research area in detail – the rationale
- Reflecting state-of-the-art – recent debate
- Demonstrating that your research will interface with what has gone before to add to the stock of knowledge in a helpful way
- Identify knowledge gaps

Reflection !

What are your sources of information for doing a proposer literature review ?

- Search strategy with key words (Mesh)
  - Peer reviewed literature – library data bases, PubMed, etc.
  - Grey literature – difficult to get
  - Review articles
- Internet based searches – WHO data bases (Hinari), Google Scholar, etc.
- Networking - conferencing

Then follows ?

Translating the conceptual framework, problem statement and literature review into research questions and possibly research hypotheses

And here hand-over to Dr Cilongola for discussions on how to develop research questions and objectives !

Thank you !