PRIORITY SETTING
FOR Research
FOR Health

**A management process
for countries**

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Priority Setting for Research for Health
A management process for countries

Council on Health Research
for Development (COHRED)

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List of Abbreviations

CHNRI	Child Health and Nutrition Research Initiative
COHRED	Council on Health Research for Development
DALE	Disability adjusted life expectancy
DALYs	Disability adjusted life years
ENHR	Essential National Health Research
HEALYs	Healthy life years
HIS	Health Information System
M&E	Monitoring and Evaluation
MoH	Ministry of Health
NHRS	National Health Research System
PCHRD	Philippine Council for Health Research and Development
PEARL	Propriety, Economic feasibility, Acceptability, Resources available, Legality
QALYs	Quality adjusted life years
R&D	Research and Development
ZonMW	The Netherlands Organisation for Health Research and Development
3D CAM	Three Dimensional Combined Approach Matrix

Introduction

Why set priorities?

How to set them?

How to best manage the priority setting process
so that it results in action?

Without national priorities for research for health countries can not guide research expenditure; promote science - technology - innovation for health; stimulate human resource development for research nor negotiate with partners for targeted funding and long-term efforts. A national research and innovation system needs focus - priorities - targets and milestones. Without priorities, development is blind. With priorities, the science and innovation sectors can flourish to support development, equity and health.

Over the past 15 years COHRED has supported countries in setting national priorities for health research. Based on this experience COHRED has developed an integrative approach that countries can use to manage their priority setting process.

The present approach has been structured as a comprehensive guide that will help the users in designing the most appropriate priority setting process for their countries. To facilitate action practical ideas, management tools, existing priority setting methods and techniques, reference documents and country examples are proposed. The approach reveals priority setting as a cyclic management process where six key practical steps are identified

1 Assessing the situation
2 Setting the scene
3 Choosing the best method
4 Planning priority setting
5 Setting priorities
6 Making priorities work

For purposes of this guide, we focus on 'research for health'. To impact on health, the national efforts in research, science & technology and innovation need to be multi-sectoral. This guide is meant for any country, region or institution that wants to make a difference in health, equity and development through research.

Priority Setting at a Glance

- Research priorities should be **credibly set and regularly updated:** set a date for an update already at the start.
- Ensure the process is **inclusive**. This is as important as the methodology used to define priorities.
- We suggest not to allocate resources to the defined priorities at once. Allow some **financial flexibility** for innovation, blue sky research or unexpected health challenges and opportunities.

Stages of development	Actions needed
1. Assess the situation[1]	
Understand the environment in which priority setting takes place	• **Map** available data on research for health governance and management, to inform priority setting • **Profile** – expand map with analysis of current production, capacity and use of research for health • **Performance assessment** – expand profile with analysis of research for health performance
2. Set the scene	
Define the focus and scope of the priority setting process	• **Focus and Scope** – decide on the area to address (i.e. diseases, health system, health research system, research institutions, or the overall science-technology-and-innovation environment of the country); timeframe; periodicity; and extent (national, sub national, institutional) of priority setting. • **Ethical standards** – define the standards with which the priority setting process should comply • **Engage partners** – formalise the partnerships arrangement and define responsibilities
3. Choose the best method	
Use methods best suited to local contexts and needs	Decide on methods to be used to **identify priority issues** • Choose appropriate methods for local context and needs: methods using and compiling existing data (compound approaches), methods providing insight in future health priorities (foresigthing techniques) • Consider use of more than one method to optimise the usefulness of results • Adapt methods to specific setting, available data and resources, and to local needs Decide on technique to be used to **rank priority issues** • Adapt ranking technique to specific setting and needs
4. Plan priority setting	
Develop a management framework to ensure best use of resources	Develop **a plan of work** with: • Expected outputs • People involved and their responsibilities • Plans for: data collection and analysis, communication, and monitoring and evaluation • Timelines and budget for: data collection and analysis, communication, and monitoring and evaluation
5. Set the priorities	
Implement the plan of work	• Apply defined methods • Implement the communication plan • Monitor the priority setting process • Evaluate outputs and outcomes of the priority setting process
6. Make priorities work	
Ensure action after the priority setting, and continuous review of progress	Ensure **action after priority setting** • Set up strategies to support the integration of defined priorities into the national research for health agenda **Monitor and evaluate** (M&E) • How priorities are being integrated in the national research for health agenda • How research results are being used in decision making, funding allocation and research outcomes **Set a time, date and process for the next review of national priorities** for research for health - and allow appeals to be heard and fairly treated.

1 If this is not the first time you set research priorities, much of this information may already be available.

STEP 1
Assessing the situation

Before engaging in a national priority setting process, it is important to understand the environment within which it will take place, and to identify existing information that will help define the actions required for a successful completion of the process. The depth of the assessment will depend on the level of complexity of the national research system being analysed, the time and resources available, and the history of national priority setting.

Key actions

Map available data on research for health governance, management and priority setting - a snapshot of the research institutions, governance, legislation and people in the country

Mapping, 9
Research for health governance and management context
  Governance structure
  Strategic legislative and policy documents
Priority setting background
  Previous priority setting
  Next priority setting

Profile – expand map with analysis of current production, capacity and use of research for health

Profiling, 10
Research for health current status
Research production
  Research capacity
  Research funding
  Use of research outputs

Performance assessment – expand profile with an analysis of the performance of the national research, science & technology, and innovation system to produce research for health

Performance assessment, 11
Research for health performance
  Country health information system assessment
  Assessment on health research production and performance

■ Tools for this step are offered in the annex of the present document

Mapping

A basic analysis of the research system will provide an overview of the context and of the priority setting background. The minimum information needed is listed below.

Research for health governance and management context

Governance structure
Map of the national research for health system to provide a schematic view of the governance structure and to clarify the relationship between stakeholders:
- National institutions, offices, directorates, and others dealing with research for health
- International representatives of the public and private sectors

Strategic legislative and policy documents
Relevant national documents that serve as reference for the organisation and evolution of research for health:
- Health sector reform strategies
- National health research policy
- National science and technology policy
- Relevant legislations and acts related to research for health

Priority setting background

Previous priority setting
Relevant information on previous priority setting cycles providing background to the design of the next priority setting cycle:
- Year of the cycle/s
- Partners involved
- Process applied and process specific characteristics
- Resulting list of priorities
- Resulting relevant documents related to national research for health priorities
- Plan of action for implementation of priorities
- Strategy for evaluation of priorities implementation

Next priority setting
Identification of political, financial and institutional support available to perform the new priority setting cycle:

Political support:
- Who provides political support and in what ways it is expressed
- What is the period of commitment in relation to political and governmental changes
- Identification of an organisation/institution that can lead the process
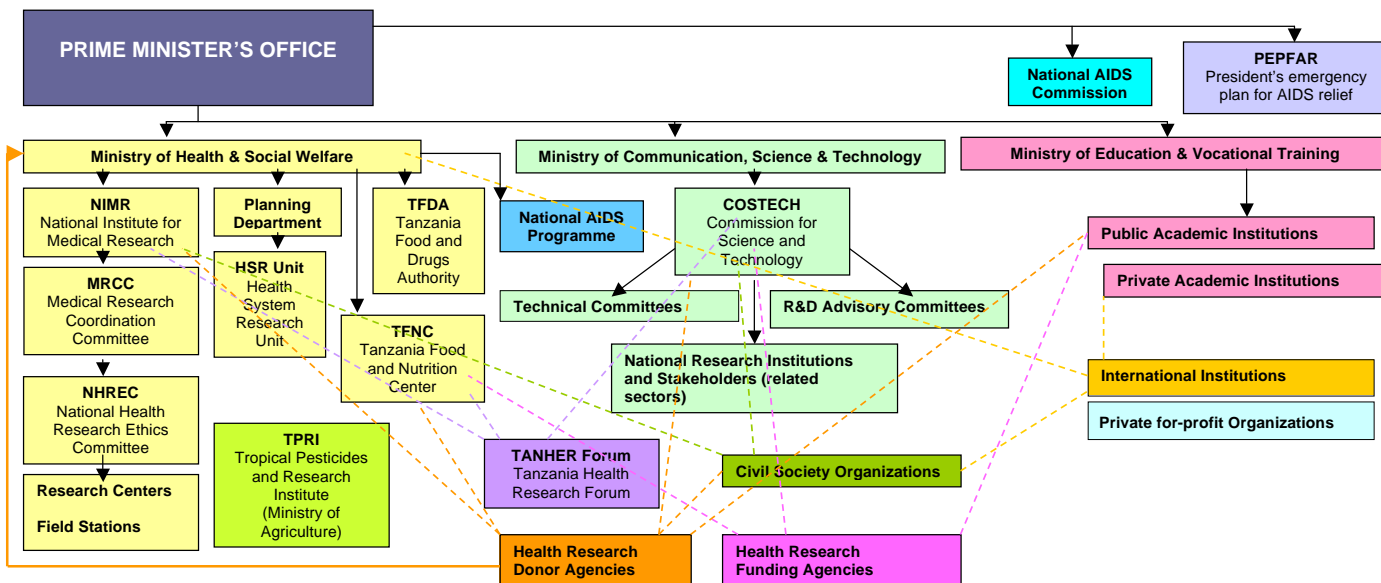
Financial support:

- What are the funding sources/institutions
- What is the budget available for the new priority setting cycle
- What is the budget available for research for health programs

Partners:

- List of organisations/institutions committed to collaborate in the priority setting process. Partners should represent all sectors of society to ensure a comprehensive view of prioritisation needs (civil society, scientists, policy-makers, administrators, private sector, and donors).

Profiling

A second, further, level of analysis of the research system will allow broadening of the basic analysis (mapping) to measure the production and use of research for health.

Research for health current status

Research production

What are the main areas of interest being addressed through health research and reflected in the national and international literature?

- Publications (at national and international level)
- Collaborations (at regional and international level)
- Existing strategies for dissemination of results

Tip

PROFILE – expand map with analysis of current production, capacity, governance, funding and use of research for health

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2 Tanzania: an assessment of the health research system (Gabriela Montorzi, Sylvia de Haan, Carel IJsselmuiden, Leonard Mboera. ISBN 92-9226-034-0, COHRED, 2009) For further information on Tanzania NHRS see: www.healthresearchweb.org

Research capacity
Capacity available to do and use research:
- Existing training plans
- Human capacity available
- Areas of responsibility
- Levels of qualification
- Disciplines
- International partnerships and collaborations

Governance capacity
Capacity available to manage, coordinate and regulate research:
- Links between the Ministry of Health, Science & Technology, and Education
- Staffing
- Communication
- Efficiency

Research funding
Committed funding sources at national and international level:
- Who funds research
- How much money is granted to different areas
- What are the alternative funding sources
- How is the funding allocation done at national and institutional levels

Use of research outputs
How and where research outputs are being used:
- Use in governmental decision-making
- Use in health practice
- Use in research for health

Performance assessment

A third level of analysis of the research system will allow broadening of the mapping and profiling to evaluate the performance of the national research system. The additional information required at this level is listed below:

Research for health performance

Country health information system assessment
- Health status indicators (mortality, morbidity)
- Health system indicators
- Risk factors indicators

Assessment of research production and performance
- Research outputs availability
- Relevance and quality of research
- Research communication and knowledge sharing
- Use of research in decision-making

Tip

PERFORMANCE ASSESSMENT
– expand profile with analysis of research for health performance

STEP 2
Setting the scene

A clear definition of the focus and scope of the work is a key step towards the successful management of the priority setting process. On the basis of the information gathered in Step 1, the focus and scope will provide the aim and the extent of the new priority setting cycle.

Key actions

Focus and Scope – decide on the area to address (i.e. diseases, health system, health research system, research institutions, or the overall science-technology-and-innovation environment of the country); timeframe; periodicity; and extent (national, sub national, institutional) of priority setting.

Ethical standards – define the standards with which the priority setting process should comply

Engage partners – formalise the partnerships arrangement and define responsibilities

■ Tools for this step are offered in the annex of the present document

Developing the focus and scope of the priority setting cycle

On the basis of the information regarding the research situation of the country obtained in Step 1, the scoping of the new priority setting cycle should provide clear guidance on the following issues:

- Focus of the priority setting (diseases, health system, health research system, research institutions, or the overall science-technology-and-innovation environment of the country)
- Time frame (interim, short-term, long-term)
- Periodicity (when will the next priority setting cycle take place)
- Extent of the priority setting (national; sub national – regional, state, department, city; institutional)

Defining the ethical standards of the priority setting process

Because priority setting is inherently a 'political' process - even though it may use technical tools and procedures - it has to be fair, and seen to be fair. A fair and legitimate priority setting process requires:

- **Capacity and quality** assurance all along.
- Prioritisation **based on evidence**, reasons and principles accepted as relevant.
- **Transparency**, ensured through documentation and communication of decisions and actions, reflecting the concerns of stakeholders at national and local levels.
- **Inclusiveness**, by ensuring that all interested parties are represented throughout the process.
- **Promotion of equity in health and development**, by ensuring the maximisation of health for the greatest number of people, independently of individual financial resources, with special focus on the poorest.

The *Accountability for Reasonableness*[3] approach serves the setting of ethical standards guiding the decisions and actions of a fair priority setting process. This approach provides the basis for informing stakeholders on the substance of deliberation regarding fair decisions under resource constraints, facilitates social learning about limits of actions, and allows connection of decision making within the priority setting process to broader, more fundamental democratic deliberative processes.

3 Setting limits fairly: Can we learn to share medical resources? (Norman Daniels, James E Sabin. Oxford University Press. Oxford, 2002)
4 Priority Setting for Health Research: Toward a management process for low and middle income countries (ISBN 92-9226-008-01, COHRED 2006)
For further information on Brazil NHRS see: www.healthresearchweb.org

The "Accountability for Reasonableness" approach identifies 4 conditions for a fair priority setting process that we have adapted as follows:

Relevance
Decisions should be made on the basis of reasons (i.e. evidence, principles, arguments) that "fair-minded" people can agree relevant under the circumstances.

Transparency
Decisions and their rationales should be transparent and made publicly accessible.

Revision
There should be opportunities to revisit and revise decisions in light of further evidence or arguments, and there should be a mechanism for challenge and dispute resolution.

Making sure it happens
There should be either voluntary or public regulation of the process to ensure that the other three conditions are met.

Formalising the engagement of partners

Before starting with the planning phase of the priority setting process, it is important to develop an explicit basis for decision making and actions related to the priority setting effort.

The document should address at least the following 4 issues in some detail:

Focus and Scope
Provide an explicit and clear statement of the agreed focus and scope of the priority setting effort.

Ethical standards
List the ethical standards with which the process should comply.

Managerial accountability
Develop a statement on the commitment of partners to the priority setting effort, with a clear indication of the division of responsibilities between partners.

Financial accountability
Outline the financial commitments of partners towards the process, and provide a transparent mechanism for financial management.

Consider having the document signed by all the partners involved in the priority setting effort to confirm formal commitment to the process and formal acceptance of the focus, scope and ethical standards. Alternatively, integrate this statement into the minutes of a planning meeting.

Tip

ENGAGE PARTNERS – formalise the partnerships arrangement and define responsibilities

Example

▲ **PHILIPPINES**

The Philippines Council for Health Research & Development (PCHRD) was designated as the lead agent in the priority setting process initiated in the early 1990s. A law was drafted to formalise the agreement between the Department of Health and the Department of Science and Technology, under which PCHRD operates.[5]

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5 Priority Setting for Health Research: Toward a management process for low and middle income countries (ISBN 92-9226-008-01, COHRED 2006)
For further information on the Philippines NHRS see: www.healthresearchweb.org

STEP 3
Choosing the best method

Once the focus and scope of the priority setting have been defined it is necessary to decide on one or more methods that will help to generate the desired list of priority issues in the most useful form for stakeholders. This section outlines current methods and techniques that have been developed to assist in priority setting.

NOTE:

In COHRED's experience, there is not 'one best method' for priority setting. We strongly suggest those responsible for priority setting to weigh complexity of methods against what is to be achieved - and what resources (financial, human, and international) are available. For example, it may seem like a 'gold-standard' to use 'burden of disease'-based methods. However, in countries without reliable mortality and morbidity data for substantial parts of the population, using a burden-of-disease approach may be prohibitive in cost. Instead, consider making "developing a good mortality and morbidity information system" a national priority, and use a Delphi method in the interim.

Key actions

Identify priority issues - decide on methods to be used

- Choose method best suited to local context and needs: methods using and compiling existing data (compound approaches); methods providing insight in future health priorities (foresighting techniques)
- Consider use of more than one method to optimize the usefulness of results
- Adapt methods to specific setting, available data and resources, and to local needs

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Rank priority issues - decide on technique to be used

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Indirect valuation techniques

■ Tools for this step are offered in the annex of the present document

Identification of priority issues

Compound approaches

Essential National Health Research Approach (ENHR)[6]

When to use
- Guide resource allocation and donor investment in health to areas of highest priorities.
- Address the issue of equity and social justice.
- Direct the attention to the most vulnerable groups of the population.
- Reinforce the links between research, action and policy.

General features
- Multidisciplinary and cross-sectoral approach.
- Systematic analysis of health needs, societal and professional expectations.
- It involves researchers, policy-makers, health care providers and community representatives.
- It is an inclusive, participatory, interactive and iterative process.
- It facilitates partnership development.
- It is demand driven: based on health needs, people's expectations and societal trends.
- Stakeholder involvement is multilevel: communities, districts, sub-national, national.
- Stakeholder involvement is multidimensional: social, economic, political, ethical, managerial, quantitative and qualitative scientific input.

Key steps
1. Holding of a national conference or workshop on Essential National Health Research, with participation from communities, researchers, health programme managers and policy makers.
2. Formation of a task force with wide representation to refine the research agenda.
3. Formation of an inter-sectoral and multidisciplinary working group (could be appointed by the Ministry of Health or other relevant institution).
4. A small group (could be university based) is tasked to develop and propose processes for priority setting.
5. A larger group of participants is involved in the actual priority-setting process.

Tip

IDENTIFY PRIORITY ISSUES
- Choose methods best suited to local context and needs
- Consider use of more than one method to optimise the usefulness of results
- Adapt methods to specific setting, available data and resources, and to local needs

Tip

COMPOUND APPROACHES – methods that use and compile existing data

Tip

ENHR – use this approach if the country does not have many reliable data

Burden of Disease Approach[7]

When to use

- Comparing the health of one population to the health of another population.
- Comparing the health of the same population over time.
- Identifying and quantifying overall health inequalities within populations.
- Measuring the effects of non-fatal health outcomes on overall population health.
- Informing debates on priorities for health service delivery and planning.
- Informing debates on priorities for research and development in the health sector.
- Improving professional training curricula in public health.
- Assessing the benefits of health interventions for use in cost-effectiveness analyses.

General features

Relates research on burden of disease and determinants, cost-effectiveness, and financial flows.

Key steps

1. Magnitude (disease burden): measure the disease burden as years of healthy life lost due to premature mortality, morbidity or disability; using summary measures such as DALYs (disability-adjusted life years), QALYs (quality adjusted life years), HEALYs (healthy life years), DALE (disability adjusted life expectancy).

2. Determinants (risk factors): analyse the factors responsible for the persistence of the burden, such as lack of knowledge about the condition, lack of tools, failure to use existing tools, or factors outside the health domain.

3. Knowledge: assess the current knowledge base to solve the health problem and evaluate the applicability of solutions, including the cost and effectiveness of existing interventions.

4. Cost-effectiveness: assess the promise of the R&D effort and examine if future research developments would reduce costs, thus allowing interventions to be applied to wider population segments. Cost-effectiveness is measured in terms of DALYs (disability-adjusted life year) saved for a given cost.

5. Resources: calculate the present level of investment into research for specific diseases and/or determinants.

Example

▲ SOUTH AFRICA

In 1997 South Africa initiated a priority setting process. Priorities where set through a combination of methods. The Ministry of Health used the Burden of Disease approach (compound approach), while the Ministry of Science and Technology used two foresighting techniques – Delphi and Roadmaps. The process resulted in the development of strategies around biotechnology, drug development, health innovation, and cost-effectiveness of the health system.[8]

Tip

BURDEN OF DISEASE APPROACH – requires sophisticated health information system and high statistical expertise

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7 Investing in Health Research and Development. Report of the Ad Hoc Committee on Health Research Relating to Future Intervention Options (World Health Organization. Geneva, 1996)

8 Priority Setting for Health Research: Toward a management process for low and middle income countries (ISBN 92-9226-008-01, COHRED 2006).
For further information on South Africa NHRS see: www.healthresearchweb.org

3D Combined Approach Matrix[9]

When to use
- Classify, organise and present the large body of information that enters into the priority setting process.
- Identify gaps in health research.
- Identify health research priorities, based on a process that includes the main stakeholders in health and health research.

General features
- It allows a multidimensional approach by integrating the public health, the institutional, and the equity dimensions.

Key steps
Public health dimension:
1. Magnitude of a health problem: measure the magnitude of a health problem under investigation.
2. Causes of the health problem: analyse the factors that are responsible for the persistence of the health problem.
3. Available evidence of interventions: assess the present knowledge available to help solve the health problem and evaluate the applicability of solutions, including the cost and the effectiveness of existing interventions.
4. Cost-effectiveness of interventions: assess the potential gain from R&D effort against other interventions, and determine whether future research developments would reduce cost, and therefore be accessible to a wider group.
5. Resource flows: calculate the present level of investments in research for the health problem that is being considered, to inform on the sources and amount of research funds that are being allocated to the specific problem.

Institutional dimension:
1. The individual, household and community: review available information relating to interventions for identified problems that can be implemented at different levels.
2. The health sector: assess the contribution of the health ministry and health institutions to the control of the specific health problem being explored.
3. Sectors other than health: assess the contribution of other ministries, departments and institutions to the control of the specific health problem being explored.
4. Governance: assess the contribution of structures and institutions at central government level and international decisions or initiative to the increase or decrease of the burden of disease.

Equity dimension:
1. Define equity stratifiers to examine the health differences among them. The most commonly used equity stratifiers are income and gender.
2. Consider issues, concerns and biases that are not effectively addressed in the institutional and public health dimensions, but are critical to the process of priority setting.

Example

▲ ARGENTINA
From 2005 to 2007 Argentina followed a priority setting process that used the Combined Approach Matrix as main method for classifying and organising the necessary knowledge and data.[10]

Tip

3D COMBINED APPROACH MATRIX
- It is highly time-consuming
- Do "pick and choose" for what you really need

Child Health Priorities Approach[11]

When to use

- Address several components of research that can be used as criteria for setting research priorities.

General features

- Systematic approach enabling better understanding of the key criteria that qualify some research options as a funding priority over the others.
- Its transparency ensures that all reasons for decision making and input from each person involved be recorded and eventually viewed and challenged at any later point in time.
- It incorporates an efficient means of considering the voice of stakeholders and wider public.

Key steps

1. The initiators of the priority setting process should gather a group of leading technical experts in the area of interest in child health.
2. The experts define the context in space, time, target population and target disease burden.
3. The members of the technical working group are expected to systematically create an exhaustive list of the competing research issues by addressing risk factors and possible interventions through 3 main instruments of health research.
4. Technical experts score all the research issues by assessing their likelihood to address each of the 5 criteria relevant to priority setting: answerability in an ethical way, efficacy and effectiveness, deliverability and affordability, maximum potential to reduce the existing disease burden and predicted effect on equity in the population.
5. Weights and thresholds are placed on the five intermediate scores to reflect the values of stakeholders' representatives from the larger reference group. In this way, the methodology ensures that the scientific assessment of the research priorities is combined with a view of the wider society in which the priorities should be implemented.
6. Weighted means of intermediate scores are then computed to derive the final "research priority score" for each research issue.
7. Technical experts use the derived scores to:
   - Perform program budgeting and marginal analysis at the country level.
   - Make the results accessible to the public.
   - Implement mechanisms for reviewing the scores and decisions.
   - Advocate and implement the identified priorities.
   - Evaluate and improve the process based on feedback information.

Tip

CHILD HEALTH PRIORITIES APPROACH – includes a 'process' - not a 'method'

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11 A New Approach for Systematic Priority Setting In Child Health Research Investment (Child Health and Nutrition Research Initiative, 2006)

Foresighting techniques

The methods of priority setting presented above are based on "historical data" - disease and mortality- resulting from risk factors from a few to many years in the past, to determine future priorities. While these may be useful for some purpose, foresighting techniques are needed to help focus research priorities on future health and development.

Below we present foresighting techniques often used in priority setting.

Visioning[12]

When to use
Reflect emerging patterns in the future.

General features
Allows to create a rich picture of what the future might look like based on a creative approach.

Key steps
1. Involving a good visionary in the exercise.
2. Providing the visionary with a clear idea of why the work is being taken forward.
3. Providing an opportunity for the visionary to be immersed in the issue with evidence of what is the present situation.
4. Capturing the visionary's vision: written report, pictures or graphics.

Scenario creation[12]

When to use
Explore the context into which strategies and policies will be played out.

General features
Provides a picture of what the future might look like. The picture is internally consistent and is built up from an assessment of how trends and drivers might influence the present to create the future. It helps identify the unexpected, both potential challenges and opportunities.

Key steps
1. Decide the question.
2. Identify the drivers.
3. Rank the drivers.
4. Decide the axes for the scenarios.
5. Draft the scenarios.
6. Test the scenarios.
7. Consider the implications of the scenarios.

12 Strategic Futures Planning. Suggestions for success. Foresight (Office of Science and Technology. Department of Trade and Industry, March 2005)

Delphi[13]

When to use
Type of consultation allowing to get an overview of what is happening in an area of science.

General features
A systematic, interactive forecasting method which relies on a panel of experts. The experts answer questionnaires in two or more rounds. After each round, a facilitator provides an anonymous summary of the experts' forecasts from the previous round as well as the reasons they provided for their judgments. Thus, experts are encouraged to revise their earlier answers in light of the replies of other members of their panel. It is believed that during this process the range of the answers will decrease and the group will converge towards the "correct" answer. Finally, the process is stopped after a pre-defined stop criterion (e.g. number of rounds, achievement of consensus, stability of results) and the mean or median scores of the final rounds determine the results.

Key steps
1. Design the questions.
2. Circulate the questions to a wide community.
3. Analyse the answers or comments of the experts' views: typically done with graphs or diagrams.
4. Present the answers in the form of assertions and rationale and circulate again for comment.
5. Produce a report setting out the final conclusions of the work.

Roadmaps[14]

When to use
Explore possible future products and key pieces of science that need to be integrated to deliver the products.

General features
Allows mapping out the specific actions needed to deliver a new technology.
A technology roadmap includes assessment of social drivers, science drivers, technologies and their applications.

Key steps
1. Deciding the type of roadmap: broad; specific.
2. Identifying current science and market drivers.
3. Building skeletons of the roadmap: putting together the broad ideas.
4. Developing the roadmap: detailed analysis of timing, costs and connections between technologies.
5. Testing the roadmaps in the community.

Example

▲ CARIBBEAN

The priority setting process lead by the Caribbean Health Research Council (CHRC) in 2010, used Delphi as main method for identification and ranking of research topics.[14]

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13 Analysis of the Future: The Delphi Method (Olaf Helmer. Rand Corporation, March 1967)

14 Technology Roadmapping: linking technology resources to business objectives (Robert Phaal, Clare Farrukh, David Probert. Centre for Technology Management, University of Cambridge, 2001)

15 For further information on Caribbean NHRS see: www.healthresearchweb.org

Ranking of priority issues

Ranking allows to position the selected priority issues in 'ascending' or 'descending' order of importance, in relation to specific (predefined) criteria. Transparency and inclusiveness need to be ensured throughout the ranking as the existing techniques are often a combination of factors, figures and value judgements.

Below we present ranking techniques often used in priority setting.

Direct valuation techniques

Comparison in pairs[16]

This technique allows focusing on two priority issues at a time. Each issue is weighed against another issue. In weighing the issues the person doing the ranking is requested to decide which issue of the two is the most important. E.g. in a list of five priority issues (A, B, C, D, E), issue A is compared to issue B, then to issue C, then to issue D, and finally to issue E. All the priority issues of the list are dealt with in the same way. The technique works best with a maximum number of 10 priority issues.

Anchored rating scale[17]

This technique uses a continuous lineal scale from 0 to 1. Each scale value is associated to a level of importance– i.e. extremely important, very important, important, not very important, to be ignored. Rating of each priority issue is done by means of the scale. A final classification is obtained by calculating the average rate assigned to each priority issue.

Indirect valuation techniques

Hanlon method[18]

The rating of priority issues is calculated through the formula (A + B) C x D, which integrates the following components:

- A: Magnitude of the problem – number of people affected by the problem, in relation to the total population.
- B: Severity of the problem – it takes into consideration the mortality, morbidity and incapacity rates, as well as the resulting financial costs. The criteria used to assess this component can either be based on objective data (e.g. mortality rate), or subjective estimations (e.g. social impact of a problem).
- C: Effectiveness of the solution – it addresses the issue of whether current resources and technology are able to generate a specific impact on the given problem.

Example

▲ PANAMA

The priority setting effort initiated by Panama in 2007 used the Hanlon method to rank the research topics identified as priorities.[19]

16 Introduction to Health Planning (P N Reeves, D E Bergwall, N B Woodside. Third Edition. Information Resources Press, Arlington, Virginia, 1984)
17 Planning Methods for Health and Related Organisations (P C Nutt. John Wiley & Sons, Toronto, 1984)
18 Public Health Administration and Practice (J J Hanlon, George E Pickett. Eighth Edition. Mirror/ Moshy College Publishing, St. Louis, 1984)

- D: Feasibility of the intervention – it assesses whether certain indicators hinder or facilitate the implementation of a given intervention. The indicators proposed by the method are summarised in the acronym PEARL – Propriety, Economic feasibility, Acceptability, Resources available, Legality.

ENHR method[20]

This technique allows assessing the value of each priority issue in relation to predefined criteria. Criteria can be defined either through brainstorming or review of relevant documents or guidelines. The resulting list of criteria is sorted into representative categories and assigned weighed score choices. Rating of priority issues can be done collectively or individually.

19 Memoria Final. Taller intersectorial e interinstitucional sobre politicas y prioridades de investigacion en salud (Comision Sectorial de Salud en SENACYT. Noviembre 2007)
  For further information on Panama NHRS see: http://www.healthresearchweb.org/
20 A manual for research priority setting using the ENHR strategy. Section 4: Criteria for priority setting (COHRED Document 2000.3, March 2000)

STEP 4
Planning for Priority Setting

Having analysed the context, defined the focus and scope, and decided on methods to be used, a detailed workplan to manage priority setting can be developed. Defining a management framework is key for optimising the cost-effectiveness of the priority setting process, that is coordinating and balancing at best the strategy with the human, temporal and financial dimension, to ensure the achievement of the desired outcomes.

Key actions

Workplan - Develop a management framework to ensure best use of human and financial resources during the priority setting process. Consider the following components:

- Expected outputs
- People involved and their responsibilities
- Data collection and analysis plan
- Communication plan
- Monitoring and evaluation plan
- Timelines and budget

Specifying the components of the workplan, 25
Identifying the deliverables
Defining the timelines
Determining the cost
Linking to human resources
Developing a communication plan
Developing a monitoring and evaluation strategy
Planning the closure of the priority setting exercise

Preparing the workplan, 26

■ Tools for this step are offered in the annex of the present document

Specifying the components of the workplan

Identifying the deliverables
The major deliverables of the priority setting process are drawn from the objectives stated in the focus and scope. Subdivision of major deliverables into manageable components will facilitate the identification of activities required to complete the expected deliverables. Coordination of the overall priority setting process is a major activity that should as well be integrated in the plan of work.

Defining the timelines
The development of a timetable adapted to the focus and scope of the priority setting requires the following actions:

1. Identification of activities that must be performed to produce the deliverables drawn from the focus and scope. Activities will be determined in part by the methods chosen in step 3.
2. Identification of the order in which the activities should be performed.
3. Estimation of time needed to complete individual activities.
4. Creation of a schedule on the basis of the activity sequencing and the activities duration.

Determining the cost
To determine the cost of the priority setting it is suggested to proceed as follows:

1. Determine the resources required (people, equipment, materials, travel, etc.) and quantities of each that should be used to perform the identified activities.
2. Develop an approximation of the overall cost of the resources needed to complete the activities.
3. Breakdown the overall cost estimate into cost estimates of individual activities.

Linking to human resources
Tasks, roles and responsibilities need to be clearly defined and assigned to the adequate persons on the basis of identified activities, resulting schedule, and cost estimate.

Developing a communication plan
A communication plan should consider the following issues:

Information and communication needs of the stakeholders:
- Who needs the information?
- When will they need it?
- How will it be given to them?
- What information do they need?

Distribution criteria of information:
- Information that will be distributed.

Example

▲ **TUNISIA**
The priority setting effort initiated by Tunisia in 2007 was planed around three phases:
- June 2007 - a workshop was organised to define partners and priority setting methodology and to approve the process to be followed;
- June to November 2007 - a dedicated steering committee developed a list of research priority issues as per the methodology previously decided;
- November 2007 - The list of research priority issues was presented at a workshop with broad stakeholder representation, for discussion and adoption.[21]

Tip

DISTRIBUTING INFORMATION – consider publishing the information relevant to the country prioritiy setting effort in 'Health Research Web', in the section dedicated to National 'Priorities for Health Research'. http://www.healthresearchweb.org

21 Les Priorités de la Recherche en Santé. Republique Tunisienne (Ministère de la Santé Publique. Direction Générale de la Santé. Direction de la Recherche Médicale. Février 2008) For further information on Tunisia NHRS see: www.healthresearchweb.org

- Format in which the information will be given.
- Distribution channels that will be used.
- Schedule of information distribution.

Developing a monitoring and evaluation strategy

Planning a M&E strategy requires careful consideration of the following issues:

- Identification of quality standards relevant to the priority setting process.
- Identification of results that should be monitored and evaluated as a measure of performance.
- Schedule of performance evaluations along the process.
- Specification of appeal mechanisms that can be used for challenge and dispute resolution regarding decisions related to the priority setting effort.
- Specification of regulation mechanisms to ensure that ethical standards are met (relevance, transparency, revision).

Planning the closure of the priority setting cycle

Once the priority setting cycle is completed, it is suggested to proceed to a formal administrative closure. Such closure can be planned ahead by preparing an official document compiling:

- Technical report describing the actions and decisions that have taken place during the priority setting, in relation to the deliverables drawn from the focus and scope.
- Agreed final list of priorities.
- Financial report reflecting the actual expenditures incurred during the priority setting, in relation to the initial budget.

Preparing the workplan

The information developed throughout this section will best serve an operational purpose if summarised in grids allowing cross linking of the different elements and an overview of the dimensions involved in the management of the process.

Development of the grids will require the consideration of the following elements:

Grid 1: deliverables plan

- Objectives (as defined in the focus and scope).
- Deliverables related to each objective (including execution of the priority setting, communication strategy, monitoring & evaluation strategy, and closure of the priority setting).
- Activities required to produce each deliverable (including production of corresponding reports).
- Schedule of activities (starting date and ending date).

- Name of the staff members and organisations allocated to the performance of each activity (including the leader staff member to whom the team should report).
- Cost of each activity (human and material resources).

Grid 2: communication plan
- Type of information to be delivered.
- Format of information to be delivered.
- Distribution channels.
- Recipients (audiences to whom the information will be delivered).
- Deadlines for information delivery.

Grid 3: monitoring & evaluation plan
- Indicators to be monitored and evaluated (focus, scope, schedule, finances, results).
- Quality standards that will guide the evaluation process.
- Schedule of performance evaluations.

STEP 5
Defining the priorities and managing the process

The extent and complexity of this step is greatly determined by the complexity and of focus, the scope, and the methods decided in the previous steps. Its success is highly dependent on the quality of the planning phase – the more consistent and systematic the action plans, the more efficient will be their execution.

Key actions

Implement the plan of work
- Apply defined methods
- Implement the communication plan
- Monitor the priority setting process
- Formally close the priority setting cycle

Implementing the priority setting strategy

The action plans developed in the previous phase should contain all the essential information to guide action. In other words, the action plans will constitute the backbone of the priority setting.

During implementation, deviations from the initial plans inevitably occur. Therefore, most of the management of this phase will focus on monitoring those deviations and producing corrective actions to either go back to the initial plan or to decide in an informed way on a new course of action.

Implementing the monitoring and evaluation plan

Monitoring the focus, scope and schedule
- Document changes in focus, scope and schedule to allow regular monitoring: additional planning, corrective actions, lessons learned.

Monitoring finances
- Monitor cost performance to detect and understand variances from initial plan.
- Ensure that all appropriate changes are recorded accurately in the cost baseline.
- Prevent incorrect or unauthorised changes from being included in the cost baseline.
- Inform appropriate stakeholders of authorised changes.
- Act to bring expected costs within acceptable limits.

Monitoring and evaluating results
- Evaluate indicators through quality standards defined in the management framework.
- Evaluate overall process performance on a regular basis to provide confidence that the process satisfies the relevant quality standards.
- Determine if specific results comply with relevant quality standards.
- Identify ways to eliminate causes of unsatisfactory performance.
- Open appeal mechanisms for dispute resolution regarding process decisions.

Implementing the communication plan

Communicating on progress and on outputs
- While executing the communication plan report on the status and progress of the communication process; forecast and report on the final outputs.

Formalising the end
Formalise the completion of the priority setting cycle through administrative closure, as planned in the management framework.

Tip

MONITORING & EVALUATION — allocate responsibility for M&E to someone everybody trusts and accepts

Tip

COMMUNICATION — needs regular update, at least 6-monthly

STEP 6
Making research for health priorities work

This is probably the most challenging phase in the priority setting process, as its success is highly dependent on the response and support of the environment. At this stage, the key concern is how to ensure that the identified and ranked priorities guide the production and management of national health research at a given period of time.

Key actions

Ensure action after priority setting
- Set up strategies to support the integration of defined priorities into the national research for health agenda

Linking research to action, 31
Decision-linked research approach
Policy dialogues approach

Monitor and evaluate
- How priorities are being integrated in the research for health agenda
- How health research results are being used in decision making, funding allocation and research outcomes

Monitoring and evaluating the implementation process, 33
Planning monitoring and evaluation
Planning impact evaluation

Set a time, date and process for the next review of national priorities for research for health - and allow appeals to be heard and fairly treated.

■ Tools for this step are offered in the annex of the present document

Linking research to action

Strategies to support the integration of the defined priorities in the national research for health agenda may include:

- Encouraging government support to the research agenda, through allocation of a specific budget to health and Science & Technology.
- Organising donors' conference to communicate and get "buy in" the research agenda.
- Encouraging researchers to focus their efforts on priority areas: by calling for proposals, by providing technical support to researchers to develop their ideas to qualify for research grants.
- Bringing together researchers in different fields, as a team, to work on related research areas.
- Ensuring the utilisation of results and improving communication: by facilitating dialogue between researchers and policy/decision makers, by translating research results into policy briefs, by disseminating research results through mass media.
- Making all stakeholders accountable: by encouraging active participation through the use of interactive platforms such as Health Research Web.

Below we present approaches that can be used to support the integration of the defined priorities in the national research agenda.

Decision-linked research approach[22]

General features

The process known as "decision-linked research" aims at establishing effective partnerships between researchers and decision makers so that research findings can be transformed into concrete systemic actions. Decision-linked research focuses on the needs of decision makers - at policy, strategic, and program levels - to improve system performance. The process requires that researchers and decision makers work together to make sure from the start that the research results will respond to decision makers' concerns, and that decision makers will know how to use such results to improve system performance.

When to use

- Helps researchers and decision makers to develop common interests – decision makers participate in the formulation of research questions; researchers and decision makers explore together key strategic and system issues, determine priority problems, and identify areas where there is a lack of knowledge that would prevent informed decision making.
- Helps decision makers understand the research methodology – when there is continuous dialogue between researchers and decision-makers, the latter are more likely to understand

22 Turning Research into Action: The Decision –Linked Research Approach (Judith Seltzer, Saul Helfenbein, John Paxman. The Manager. Volume VIII, Number 3, Fall 1999)

the types of decisions the research findings can support, and the limitations of the new knowledge.

- • Helps both groups transform the results into action – bringing decision makers into the process at the very beginning of the research initiative builds ownership of the results and commitment to taking action.

Key steps

Creating a partnership between researchers and decision makers
1. Establish a research advisory board.
2. Identify principal researchers.
3. Select the appropriate research questions.

Making the research methodology and findings understandable
4. Review previous research studies.
5. Determine new data requirements for the research protocol.
6. Implement the research protocol.
7. Organise and interpret the findings.

Transforming the findings into action
8. Identify options for taking action.
9. Disseminate the findings and options for action.
10. Assess the impact of the research findings on program performance.

Policy dialogues approach[23]

General features

Policy dialogues represent a new and evolving approach to supporting evidence-informed policymaking. Their goal is to support the full discussion of relevant considerations (including research evidence) about a high priority issue. They provide a vehicle for harnessing many types of information and creating locally contextualised knowledge in order to inform policymaking and other types of action.

When to use

Policy dialogues have the potential to improve the use of research by directly supporting:

- • Interactions between researchers and policymakers (and among a wider range of stakeholders who are able to take action).
- • Timely identification and interpretation of the available research evidence (when a policy dialogue is urgently organised to address a high priority issue).
- • 'Real time' identification of accord between research evidence and the beliefs, values, interests or political goals and strategies of policymakers and stakeholders.

Key steps

The following questions can guide the organisation and use of policy

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23 Support tools for evidence-informed health policymaking (STP) 14: Organising and using policy dialogues to support evidence-informed policymaking (John N Lavis, Jennifer A Boyko, Andrew D Oxman, Simon Lewin and Atle Fretheim. Health Research Policy and Systems 7, Suppl1:S14, 2009)

dialogues to support evidence-informed policymaking:

1. Does the dialogue address a high priority issue?
2. Does the dialogue provide opportunities to discuss the problem, options to address the problem, and key implementation considerations?
3. Is the dialogue informed by a pre-circulated policy brief and by a discussion about the full range of factors that can influence the policymaking process?
4. Does the dialogue ensure fair representation among those who will be involved in, or affected by, future decisions related to the issue?
5. Does the dialogue engage a facilitator, follow a rule about not attributing comments to individuals, and not aim for consensus?
6. Are outputs produced and follow-up activities undertaken to support action?

Monitoring and evaluating the implementation process

A regular monitoring of how research for health priorities are being integrated in the agenda provides essential information for evaluating the success of the priority setting cycle and assessing the need for revising and updating the current research priorities list.

The revision of the agenda and the assessment of the impact of research policies provides essential information for deciding on the need of a new priority setting cycle.

Planning monitoring and evaluation[24]

When planning monitoring and evaluation some preliminary questions may need to be considered:

1. Is monitoring necessary?
2. What should be measured?
3. Should an impact evaluation be conducted?
4. How should the impact evaluation be done?

The importance of monitoring depends on the perceived need among relevant stakeholders to know more about what is happening 'on the ground'. Data are particularly useful if corrective action is undertaken when a gap is identified between expected and actual results. Such findings may result in expectations being reconsidered.

Monitoring indicators
Indicators are frequently used as part of the monitoring process. An indicator can be defined as a quantitative or qualitative factor or variable

Tip

MONITOR & EVALUATE
integration of priorities in the research for health agenda, and use of research for health results in decision making

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24 Support tools for evidence-informed policymaking in health 18: Planning monitoring and evaluation of policies (Atle Fretheim, Andrew D Oxman, John N Lavis and Simon Lewin. Health Research Policy and Systems 7, Suppl1:S18, 2009)

that provides a simple and reliable means to measure achievement. A number of factors need to be considered when selecting which indicator to use:

- Validity: the extent to which the indicator accurately measures what it purports to measure.
- Acceptability: the extent to which the indicator is acceptable to those who are being assessed and those undertaking the assessment.
- Feasibility: the extent to which valid, reliable and consistent data are available for collection.
- Reliability: the extent to which there is minimal measurement error, or the extent to which findings are reproducible.
- Sensitivity to change: the extent to which the indicator has the ability to detect changes in the unit of measurement.
- Predictive validity: the extent to which the indicator has the ability to accurately predict relevant outcomes.

Planning impact evaluation

The establishment of a causal relationship between a programme or policy and changes in outcomes is at the core of what impact evaluation is about.

Impact evaluations should be planned well ahead of programme implementation in conjunction with relevant stakeholders, including policymakers.

Framework for assessing the success of priority setting[25]

The following indicators are proposed to evaluate the success of priority setting in terms of process and outcome:

Process indicators

1. Stakeholder engagement: Organisation's efforts to identify the relevant internal and external stakeholders and to involve them effectively in the decision making process.

2. Use of explicit process: Transparent to all stakeholders, i.e. knowing who is making the decisions, how the decisions will be made, and why decisions where made.

3. Information management: Information made available to decision makers during the priority setting process, including what was used and what was perceived to be lacking, how it was collected and collated.

4. Consideration of values and context: Priority setting decisions should be based on reasons that are grounded in clear value choices (values of the organisation, the values of staff within that organisation, and the values of other stakeholders). Those reasons should be made explicit.

5. Revision of appeal mechanisms: Formal mechanisms for reviewing decisions and for addressing disagreements constructively. A revision process should allow to improve the quality of decisions by providing opportunities for new information to be brought forward, errors to be corrected and failures to remedied.

Tip

IMPACT from research is often very long term

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25 Priority setting: what constitutes success? A conceptual framework for successful priority setting (Shannon L Sibbald, Peter A Singer, Ross Upshur, and Douglas K Martin. BMC Health Services Research 9:43, 2009)

Outcome indicators

6. Improved stakeholder understanding: Gained insight into the priority setting process – goals, rationale for process, rationale for decisions. Gained insight into the organisation – mission, vision, values, strategic plan.

7. Shifted priorities and/or reallocated resources: Allocation of budgets across portfolios. Changes in utilisation of physical resources. Changes in strategic directions. A reaffirmation of previous resource allocation decisions may, in some circumstances, be seen as a success.

8. Improved decision making quality: Appropriate use of available evidence, consistency of reasoning, institutionalisation of the priority setting process, alignment with the goals of the process, and compliance with the prescribed process.

9. Stakeholder acceptance and satisfaction: Stakeholder acceptance is indicated by continued willingness to participate in the process, as well as a degree of contentment with the process.

10. Positive externalities: Positive media coverage (which can contribute to public dialogue, social learning, improved decision making in subsequent iterations of priority setting). Peer recognition, changes in policies, and potential changes to legislations or practice.
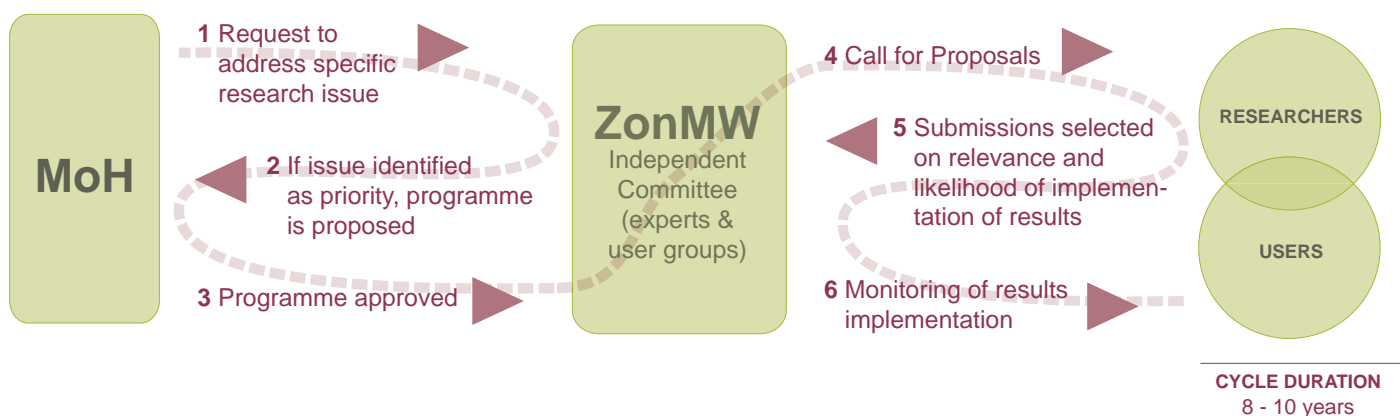
Example

▲ **THE NETHERLANDS**

One of the main national research funders in The Netherlands is the Ministry of Health (MoH). The Netherland Organisation for Research and Development (ZonMW) acts as the main national research coordinator and is mainly funded by MoH (70% of funding). The priority setting process involving both organisations is schematised below.[26]

MoH

1 Request to address specific research issue

2 If issue identified as priority, programme is proposed

3 Programme approved

ZonMW Independent Committee (experts & user groups)

4 Call for Proposals

5 Submissions selected on relevance and likelihood of implementation of results

6 Monitoring of results implementation

RESEARCHERS

USERS

CYCLE DURATION 8 - 10 years

26 Priority Setting for Health Research: Toward a management process for low and middle income countries (ISBN 92-9226-008-01, COHRED 2006)

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Tanzania: an assessment of the health research system (Gabriela Montorzi, Sylvia de Haan, Carel IJsselmuiden, Leonard Mboera. ISBN 92- 9226-034-0, COHRED, 2009)

Technology Roadmapping: linking technology resources to business objectives (Robert Phaal, Clare Farrukh, David Probert. Centre for Technology Management, University of Cambridge, 2001)

The 3D Combined Approach Matrix: An improved tool for setting priorities in research for health (Abdul Ghaffar, Téa Collins, Stephen A Matlin, Sylvie Olifson. Global Forum for Health Research, 2009)

Turning Research into Action: The Decision–Linked Research Approach (Judith Seltzer, Saul Helfenbein, John Paxman. The Manager. Volume VIII, Number 3, Fall 1999)

ANNEX
Tools for priority setting for research for health

The tools listed in the following table can be downloaded from the priority setting resource area of COHRED website:
http://www.cohred.org/prioritysetting/

STEP 1	ISSUE	TOOLS
Assessing the situation	Mapping governance structure	NHRS mapping-questionnaire *word* NHRS mapping-tree *mind map* NHRS mapping-tree *excel*
	Mapping NHRS policies	NHRS policies-questionnaire *word*
	Mapping priority setting background	NHRS priorities-questionnaire *word*
	Mapping stakeholders	Checklist for identification of stakeholders *word* Futures toolkit – involving the right people *pdf*
	Profiling	Checklist of issues to be considered in situation analysis *word* NHRS profiling – questionnaire *excel*
	Performance assessment	HIS assessment *excel* Is research working for you? *pdf*

STEP 2	ISSUE	TOOLS
Setting the scene	Defining the scope	Futures toolkit – deciding the scope *pdf*
	Defining ethical standards	Accountability for reasonableness *pdf*

STEP 3	ISSUE	TOOLS
Choosing the appropriate method	Compound approaches	Essential National Health Research Approach *pdf* Burden of Disease Approach *pdf* 3D Combined Approach Matrix *pdf* Child Health Priorities Approach *pdf*
	Foresighting techniques	Deciding the futures approach – Visioning *pdf* Scenario creation *pdf* Delphi *pdf* Roadmaps *pdf*
	Ranking of priority issues – Direct valuation techniques	Comparison in pairs *Introduction to Health Planning (P N Reeves, D E Bergwall, N B Woodside. Third Edition. Information Resources Press, Arlington, Virginia, 1984)*

Choosing the appropriate method *(continued)*		Anchored rating scale *Planning Methods for Health and Related Organisations (P C Nutt. John Wiley & Sons, Toronto, 1984)*
	Ranking of priority issues - Indirect valuation techniques	Hanlon method *Public Health Administration and Practice (J J Hanlon, George E Pickett. Eighth Edition. Mirror/Moshy College Publishing, St. Louis, 1984)* ENHR method *A manual for research priority setting using the ENHR strategy. Section 4: Criteria for priority setting (COHRED Document 2000.3, March 2000) pdf*

STEP 4	ISSUE	TOOLS
Planning for priority setting	Timelines	Futures toolkit – action plan *pdf*
	Cost	Futures toolkit – setting a timetable and a budget *pdf*
	Communication	Futures toolkit – communication *pdf*
	Monitoring and evaluation	M&E indicators – practical suggestions *word*

STEP 6	ISSUE	TOOLS
Making health research priorities work	Linking research to action	Decision-linked research approach *pdf* Policy dialogues approach *pdf*
	Monitoring & evaluating the implementation process	Framework for successful priority setting *pdf*