

**POSHAN**

Led by IFPRI 

# Knowledge Systems and Networks for Nutrition in India: A Review

**Report**

No. 1 | March 2014

Led by IFPRI 

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Centre for Equity Studies

Coalition for Sustainable Nutrition Security in India

Institute of Development Studies (IDS)

One World South Asia

Public Health Foundation of India (PHFI)

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## About POSHAN

POSHAN (Partnerships and Opportunities to Strengthen and Harmonize Actions for Nutrition in India) is a 4-year initiative that aims to build evidence on effective actions for nutrition and support the use of evidence in decisionmaking. It is supported by the Bill & Melinda Gates Foundation and led by IFPRI in India.

*This Report has been prepared as an output for POSHAN, and has not been peer reviewed. Any opinions stated herein are those of the authors and do not necessarily reflect the policies or opinions of IFPRI.*

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## EXECUTIVE SUMMARY

The review provides an overview of the existing knowledge systems and networks (both physical and virtual) catering to nutrition-based information needs of policymaking audiences in India.

The review has considered those networks or systems that play some role in one or more of the following:

- Making credible, relevant, and contextualized knowledge available to policymaking audiences
- Increasing decisionmakers' access to knowledge by opening up access to sources of knowledge (websites, conferences, technology, etc.)
- Working to increase engagement with and build capacity and willingness to use and apply research knowledge

The review looked at a total of 24 virtual or face-to-face knowledge systems/networks, including key organizations who are involved in generation and dissemination of nutrition-specific information. It focused on those that are most likely to be used by policymakers and decisionmakers in the maternal and child health and nutrition fields in India. The review's primary focus has been on initiatives working at a national level; however, where regional or international structures are seen to be relevant, these have been included. At this stage the review has not included a detailed analysis of state-level networks /systems, but has highlighted one or two mechanisms that operate at this level.

Desk research analyzed the range and scope of 16 of the systems/networks and used an adaptation of the Overseas Development Institute's (ODI) "Networks Functions Approach" (NFA) methodology<sup>1</sup> to analyze the role each is playing in mobilizing knowledge. The desk research was complemented by interviews with representatives from 10 of the 24 networks and systems to identify who is accessing the network/system, what use are they making of it, and what evidence is there that knowledge is being taken up in policymaking or practice.

The first part of this review provides an overview of the current nutrition knowledge landscape in India based on the secondary research conducted on the existing knowledge systems and networks catering to nutrition-based information needs of policymaking audiences in India. The second section of the report shares the outcomes of face-to-face interviews conducted with the conveners of these knowledge networks. It also shares the findings from the interviews with decisionmakers and program implementers and impressions of these networks from a user perspective.

The brief findings in the review:

### *Range and Scope*

There are few virtual systems with a sole focus on nutrition, with nutrition most commonly being a subset of health. There are a number of repositories that include nutrition, but there do not appear to be formal links between these repositories and there is not one agreed system for classifying and arranging the information. The vast majority operates in English and most of the networks operate at the national level, with a few reaching the district level, such as the Right to Food Campaign, National Neonatology Forum, and Public Health Resource Network (PHRN).

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<sup>1</sup> For more information on the Networks Functions Approach, please see <http://www.odi.org.uk/resources/docs/831.pdf>.

### *Roles played in Mobilizing Knowledge*

Of the 16 networks/systems reviewed with the ODI NFA methodology, 10 initiatives help to bring various stakeholders together face-to-face or on virtual platforms to discuss and learn key nutrition issues, such as Solution Exchange and Coalition for Sustainable Nutrition Security. Four networks play an advocacy role like, for example, the Breastfeeding Promotion Network of India (BPNI) and Right to Food Campaign. Most Knowledge Systems that filter and make information available follow systematic procedures on quality of content shared, such as the National Child Health Resource Centre (NCHRC) and National Health Systems Resource Centre (NHSRC). Training and Capacity of frontline workers also forms a core focus of some of the networks, such as the National Neonatology Forum, and PHRN. We did not identify the existence of any initiatives to strengthen skills to use and interpret evidence (information capability). In general, we found that the networks that are encouraging increased engagement with and use of knowledge do not have a strong content repository and repositories do not have a strong focus on increasing engagement with and use of knowledge.

### *Access and Use*

The review found that these networks and systems are reaching thousands of people, including nutrition, health, and food security practitioners; experts; policymakers; and national and international bodies. Most do not have an explicit policy influencing role, but rather aim to facilitate knowledge exchange and strengthen program practice. However, there is some evidence that many have played a role at informing and strengthening the policy or practice of its members or other stakeholders. Evidence of how the knowledge shared by the networks/systems is being used is not complete, due to the limited use of mechanisms to monitor access and capture feedback. The users' perspectives also revealed that there was awareness regarding these KM initiatives but limited usage. When used, face-to-face events have been reported to be effective at building ownership, promoting greater interaction, and energizing networks. Various respondents expressed that membership engagement and resource constraints posed a key challenge toward sustaining these initiatives, and limited active participation from the decisionmakers was seen as a bottleneck toward effective knowledge mobilization efforts.

## SECTION 1: FINDINGS FROM THE DESK REVIEW

### 1. INTRODUCTION

#### 1.1. Background to POSHAN

Partnerships and Opportunities to Strengthen and Harmonize Actions for Nutrition (POSHAN) in India aims to improve and support policy and program decisions and actions to accelerate reductions in maternal and child undernutrition in India, through an inclusive process of evidence synthesis, knowledge generation, and knowledge mobilization. POSHAN has two major objectives:

1. Analyze direct and indirect nutrition-relevant interventions to generate knowledge on optimal approaches to address major bottlenecks to improve maternal and child nutrition outcomes in India
2. Mobilize evidence-based and actionable knowledge to inform policy formulation and support program planning for nutrition at the national level and in three-to-four key states

The Institute for Development Studies (IDS), Sussex, and the Public Health Foundation of India (PHFI), India, are core partners with the International Food Policy Research Institute (IFPRI) in developing a knowledge mobilization strategy for achieving Objective 2 of POSHAN.

#### 1.2. About this review

In order to ensure that a knowledge mobilization strategy for POSHAN is as effective and the benefits are as sustainable as possible, we have conducted a review of existing knowledge systems and networks that play a role in mobilizing nutrition-related knowledge in India. This review has focused on those systems or networks that are most likely to be used by the target policymakers and decisionmakers.

The desk review has looked at the purpose, scope, and, where possible, the effectiveness of each system or network in contributing to more evidence-informed policymaking and practice.

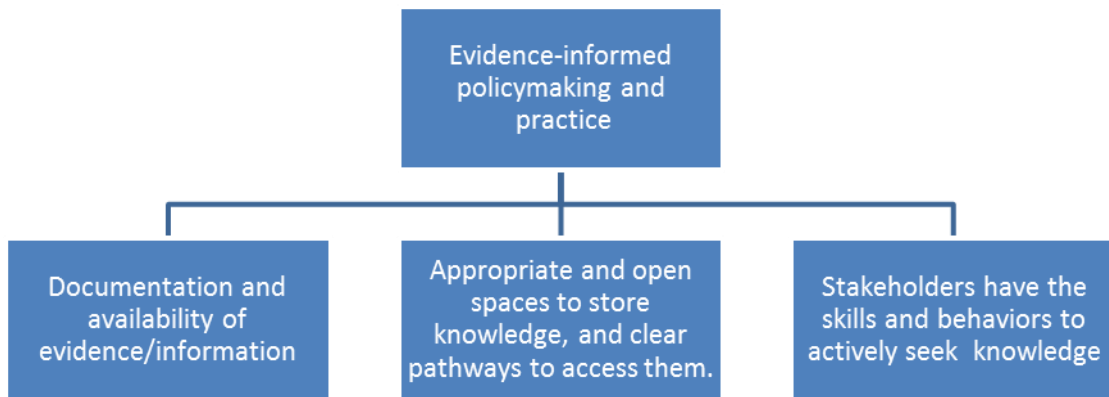
The information from the desk review has been complimented by the stakeholder mapping and audience research. Interviews were conducted with the conveners of knowledge mobilization efforts. These activities gave a richer sense of what people are using and value (or not) and what kinds of knowledge services and products they might be most inclined to use/engage with in the future.

### 2. COMPONENTS OF EFFECTIVE KNOWLEDGE MOBILIZATION

Knowledge mobilization is an emergent term referring to the process of connecting research to decisionmakers to inform decisions about public policy and professional practice. There are multiple conceptual frameworks in this field; almost all use some version of a tripartite frame—the creation and synthesis of research/evidence/knowledge, the processes (spaces and pathways) through which that knowledge is distributed or made available, and the uses made of it, with varying degrees of feedback and interaction among these elements to recognize that the process does not just flow in one direction.

Bringing stakeholders together to both create and share knowledge is one key cross-cutting approach to support the meeting of these requirements.

Figure 1 Knowledge mobilization in support of policymaking



### 2.1. Understanding of knowledge mobilization

“Understanding of knowledge mobilization as a process has deepened considerably in recent years. Among the key elements now considered largely as beyond dispute are” (Levin 2008)...:

- It is often very hard to know what role a body of research or evidence has had on practice, since the sources of practices and decisions are usually multiple and hard to define with precision.
- Knowledge by itself is not enough to change practice, since practices are social and therefore reinforced by many elements, such as norms, cultures, and habits. Simply telling people about evidence and urging them to change what they do is clearly ineffective.
- The relationship between knowledge and use runs in both directions; practice affects research just as research affects practice.
- KM is not only a matter of producing more knowledge, but also of improving both the desire and capacity for its use as well as the mediating processes.
- Dedicated effort matters. KM does not happen by itself; it takes thoughtful effort on a sustained basis, probably over many years. This effort requires resources and infrastructure, much of which does not yet exist.
- Third party organizations of all kinds—sometimes called mediators or brokers—play a critical role in the knowledge spread. IDS, among others, is playing a role in understanding their nature and roles, but there is still much to do.

## 3. METHODOLOGY USED FOR IDENTIFYING AND ASSESSING NUTRITION-BASED KNOWLEDGE SYSTEMS AND NETWORKS IN INDIA

POSHAN principally aims to influence policymakers in the nutrition arena who will apply (and multiply) the knowledge within their areas of work.

### 3.1. Identifying knowledge systems, networks, and organizations to review

For this review we undertook desk research to identify the key **knowledge systems, knowledge networks,** and other **organizations** (principally repositories) that play a role in bringing knowledge to nutrition-relevant policy/decisionmaking audiences and facilitating their engagement with it. This covers networks/systems that play some role in one or more of the three areas below:

- Those that work to make knowledge more available, relevant, or digestible to these audiences.

- Those that facilitate access to this knowledge for those audiences (through websites, conferences, network meetings, etc.).
- Those that facilitate or promote the engagement of these audiences with this knowledge (including through online/face-to-face discussions, information capability training, etc.).

#### Box 1 Key terms

**Knowledge System:** A virtual tool to support the creation, capture, storage, and dissemination of information—making it accessible to others.

**Knowledge Networks:** Networks that aim to

- Share information and create new knowledge
- Strengthen research and communication capacity among members, and
- Identify and implement strategies to engage decisionmakers more directly, linking to appropriate processes in the areas of policy and practice (IISD definition 2001).

Our primary focus has been on initiatives working at a national level; however, where regional or international structures are seen to be relevant, we have included these. At this stage, we have not included a detailed analysis of state-level networks/systems, but have highlighted one or two mechanisms that operate at this level.

In order to identify these initiatives, we worked with our partner, One World South Asia, to refine our dataset and to undertake the initial data gathering. This has been complimented and expanded by first-hand knowledge and desk research from within the team.

#### Box 2 List of knowledge systems and networks that were analyzed as part of the review

##### Knowledge Systems<sup>a</sup>

India Development Gateway (<http://www.indg.in/India>)<sup>b</sup>  
 Mother and Child Nutrition.org (<http://motherchildnutrition.org/india/index.html>)<sup>b</sup>  
 National Child Health Resource Centre (NCHRC) (<http://202.71.128.172/nihfw/nchrc/>)<sup>b</sup>  
 National Health Systems Resource Centre (NHSRC) (<http://nhsrccindia.org/index.php>)<sup>b</sup>  
 National Institute of Nutrition (<http://www.ninindia.org/employment.htm>)  
 National Institute of Public Cooperation and Child Development (<http://nipccd.nic.in/>)  
 Nutrition Foundation of India  
 Nutrition Society of India (<http://www.nutritionsofndia.org/default.htm>)  
 Regional Resource Centres (RRC) (<http://www.fpaindia.org/FinalWeb/home.htm>)  
 United Nations Standing Committee on Nutrition (<http://www.unscn.org/>)<sup>b</sup>  
 Virtual Resource Centre (<http://www.jskvrcc.gov.in/about.asp>)<sup>b</sup>

##### Knowledge Networks<sup>a</sup>

Breastfeeding Promotion Network of India (<http://www.bpni.org/>)<sup>b</sup>  
 Child Health and Nutrition Research Initiative (CHNRI) (<http://www.chnri.org/>)<sup>b</sup>  
 Coalition for Sustainable Nutrition Security (<http://www.nutritioncoalition.in/>)<sup>b</sup>  
 National Neonatology Forum (NNF) (<http://www.nnf.org/>)<sup>b</sup>  
 Protein Foods and Nutrition Development Association of India (PENDAI) (<http://www.pfndai.com/index.htm>)<sup>b</sup>  
 Public Health Resource Network (<http://www.phrindia.org/index.html>)<sup>b</sup>  
 Right to Food Campaign (<http://www.righttofoodindia.org/>)  
 Solution Exchange for the Food and Nutrition Security Community of Practice<sup>b</sup>  
 Solution Exchange for the Maternal and Child Health Community of Practice (<http://www.solutionexchange-un.net.in>)<sup>b</sup>  
 South Asian Public Health Forum (<http://www.saphf.org/index.htm>)<sup>b</sup>  
 South East Asian Nutrition Research cum Action Network (<https://apps.who.int/nut/research3.htm>)<sup>b</sup>  
 White Ribbon Alliance (<http://www.whiteribbonalliance.org/index.cfm/about/>)<sup>b</sup>  
 PRS Legislative Research (<http://www.prsindia.org/>)

<sup>a</sup> Analyzed with NFA methodology—representatives participated in knowledge network interviews.

<sup>b</sup> Many of those listed above could be described as both systems and networks.

### 3.2. Our approach to assessing nutrition-related knowledge systems and networks

To review the knowledge systems and networks relating to nutrition in India, we undertook desk-based research to find out more about their purpose, reach, and approach. This included looking at their geographic and thematic focus, principle languages used, key knowledge products and services, and key target audiences.

In addition to mapping the generic features of each network or system, we looked through the lens of an adapted version of the **Overseas Development Institute (ODI) Networks Function Approach** to permit a more nuanced analysis of some of the functions of knowledge systems and networks. This is not a perfect tool for this exercise, as it was designed specifically for networks. However, we felt that the criteria would allow us to assess systems at a broad level and have included further questions to help analyze their effectiveness.

The Network Functions Approach (NFA) (Ramalingam, Mendizabal, and Schenkenberg van Mierop 2008) is described below.

The Network Functions Approach (NFA) was developed by the Overseas Development Institute's (ODI) Research and Policy in Development (RAPID) program and is built around six overlapping functions that networks perform in various combinations. These functions are

1. **Community Building:** The network functions to promote and sustain the values of the individuals or groups, building trust and connecting members within the network.
2. **Filtering:** The network functions to organize and manage relevant external information and ideas for its members or for an external party.
3. **Amplifying:** The network functions to help take new, little-known, or little-understood ideas or messages and makes them public, gives them weight, or makes them understandable for external audiences. (Here the review looked at initiatives that have been encouraging awareness on certain issues, rather than function of amplifying in particular.)
4. **Facilitating (and learning):** The network functions to help members carry out their activities more efficiently and effectively by providing opportunities for sharing and enabling members to learn from each other.
5. **Investing/providing:** The network functions to offer a means to provide members with the resources they need to carry out their main activities, often by brokering supply and demand between members and donors, experts and trainers.
6. **Convening:** The network functions to bring together different, distinct people or groups of people with distinct strategies and products to target and support them.

The organizations (listed 17–23) have not been analyzed as per the NFA approach, but have been considered as being the key influencers or information agents. However, these have been integrated into the analysis where appropriate.

## 4. DESK REVIEW FINDINGS

The review looked at 23 knowledge systems, networks, and organizations. Below is an overview of their operations in terms of coverage, knowledge services, thematic focus, and technology use. Table 1 (on page 6) also presents an overview of key findings.

#### 4.1. Coverage

Most of the initiatives reviewed operate at a global, regional (specifically South Asia), and national level, and involve key stakeholders from the health and nutrition sectors, as outlined below.

- **Global and regional level:** The United Nations Standing Committee on Nutrition is facilitating knowledge mobilization for nutrition at a global level, while South Asian Public Health Forum and South East Asian Nutrition Research cum Action Network operate at a regional level.
- **National level:** There are many initiatives that are focusing on facilitating information and knowledge uptake at the national level, such as the Food and Nutrition Security Community, Coalition for Sustainable Nutrition Security, Breastfeeding Promotion Network, National Child Health Resource Centre, and more.
- **State level:** The Public Health Resource Network (PHRN) is a state-level initiative focusing on seven states. The Regional Resource Centre (RRC) initiative of the Ministry of Health and Family Welfare also focuses on states for delivery of capacity building services.

The RRC are facilitated by key organizations such as the Voluntary Health Association of India, CHETNA, CINI, and more, for implementation of training to the frontline workers in 11 states. Here the state-level portals<sup>2</sup> of the Integrated Child Development Services (ICDS) have information in regional languages and a dedicated web presence that informs on their operations. However, these sites do not particularly highlight nutrition-based information and knowledge on best practices. It only provides details of ICDS implementation in terms of numbers and reach in their respective states.

Overall, the review found that both networks and systems operated at pan-level and lacked participation of the grass roots, probably due, in part, to lack of access, content, and preferred language. See Table 1 for overview.

#### 4.2. Knowledge services

The systems and networks reviewed provide members with a range of information and knowledge resources. Some networks produce discussion outcomes as consolidations of e-discussions, providing a synopsis of key aspects on the issue in question, as done by Solution Exchange. The other networks have the discussions archived online. Most of the knowledge products include newsletters, bulletins, research papers, consolidated replies, and more. The virtual resource center hosts materials for use by the program implementers in various formats. All the offline materials are also made available online. Most of the information and knowledge is either produced by the initiator or by members of the initiative, but there are a few intermediary initiatives that also pull together content from multiple sources (i.e., not just from their own organization), including India Development Gateway.

#### 4.3. Coverage of language groups

All the initiatives except one are in English. The India Development Gateway provides materials in multiple languages. There are state-level initiatives of ICDS that have content in Hindi. In addition, BPNI has some of the training and advocacy content in Hindi. The NCHRC and VRC host some training materials in Hindi.

#### 4.4. Thematic coverage

Knowledge networks with a key thematic focus on nutrition include:

- Solution Exchange for the Food and Nutrition Security

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<sup>2</sup> ICDS, Uttarpradesh - <http://icdsupweb.org/hindi/index.html>; ICDS Maharashtra - <http://icds.gov.in/#>.

- The Coalition for Sustainable Nutrition Security
- Protein Foods and Nutrition Development Association of India (PENDAI)
- The UN Standing Committee for Nutrition

One or two systems/networks focus on one specific pro-nutrition initiative, for example the Breastfeeding Promotion Network of India. Of the other networks/systems, the focus is principally on health, and even though nutrition features, it requires further integration.

#### 4.5. Technology

The review did not look in depth at technology aspects—in terms of open source and license usage, mainly because of the lack of information available and the inability to judge the platforms on which they are built. Although looking at the platforms that facilitate knowledge sharing, many of them use the **e-groups of Yahoo or Google**. Solution Exchange uses **mailman**. The rest of the networks and systems use platforms that support online discussion and parallel archiving of the discussion and resources shared.

**Table 1 A matrix highlighting the key findings**

<b>Initiative</b>	<b>System/ Network/ Repository</b>	<b>Geographical coverage</b>	<b>Language</b>	<b>Focus</b>	<b>Products</b>
<b>Solution Exchange</b>	System/ Network	National	English	Food and Nutrition Security and Maternal and Child Health	Consolidated replies, News updates
<b>India Development Gateway</b>	Repository	National	Multilingual	Health and Nutrition	MIS-based IT products
<b>South Asian Public Health Forum</b>	Network	South Asia	English	Health	Public health news, articles, newsletters
<b>The South East Asia Nutrition Research cum Action Network</b>	Network	South East Asia	English	Health	Network newsletters
<b>National Child Health Resource Center (NCHRC)</b>	Repository	National	English	Maternal and Child Health	Online repository
<b>National Health Systems Resource Centre (NHSRC)</b>	Repository/ System	National	English	Maternal and Child Health	Reference materials and factual databases
<b>Virtual Resource Centre</b>	Repository	National	English	Population Stabilization	Hosts range of products for grass-roots use in various formats
<b>Mother and Child Nutrition.org</b>	Repository	Global	English	Health and Nutrition	Online repository status information, nutrition programs, advocacy information, datasets
<b>United Nations Standing Committee on Nutrition</b>	Network/ System/ Repository	Global	English	Nutrition	SCN News, Nutrition Information in Crisis Situations (NICS), Reports on the World Nutrition Situation, nutrition policy papers
<b>The Coalition for Sustainable Nutrition Security</b>	Network	National	English	Nutrition	Leadership Agenda for Action to curb malnutrition
<b>Breastfeeding Promotion Network of India</b>	Network	National	English	Breastfeeding	Fact sheets, news updates, educational material
<b>National Neonatology Forum (NNF)</b>	Network	National	English	Neonatal Care	Bulletins, guidelines, fact sheets
<b>Protein Foods and Nutrition Development Association of India (PENDAI)</b>	Network	National	English	Protein Consumption	Bulletin
<b>Child Health and Nutrition Research Initiative (CHNRI)</b>	Network/ System	Global	English	Child Health and Nutrition	Peer-reviewed articles, monographs, and research briefs
<b>White Ribbon Alliance</b>	Network	Global	English	Health	Online information sources and educational materials
<b>Public Health Resource Network</b>	Network	Chhattisgarh, Jharkhand, Bihar, Orissa, Rajasthan, Haryana, Uttarakh, and North Eastern states	English	Health	Newsletters, educational materials

## 5. ROLE AND EFFECTIVENESS OF THE SYSTEMS/NETWORKS REVIEWED

### 5.1. Community building and convening

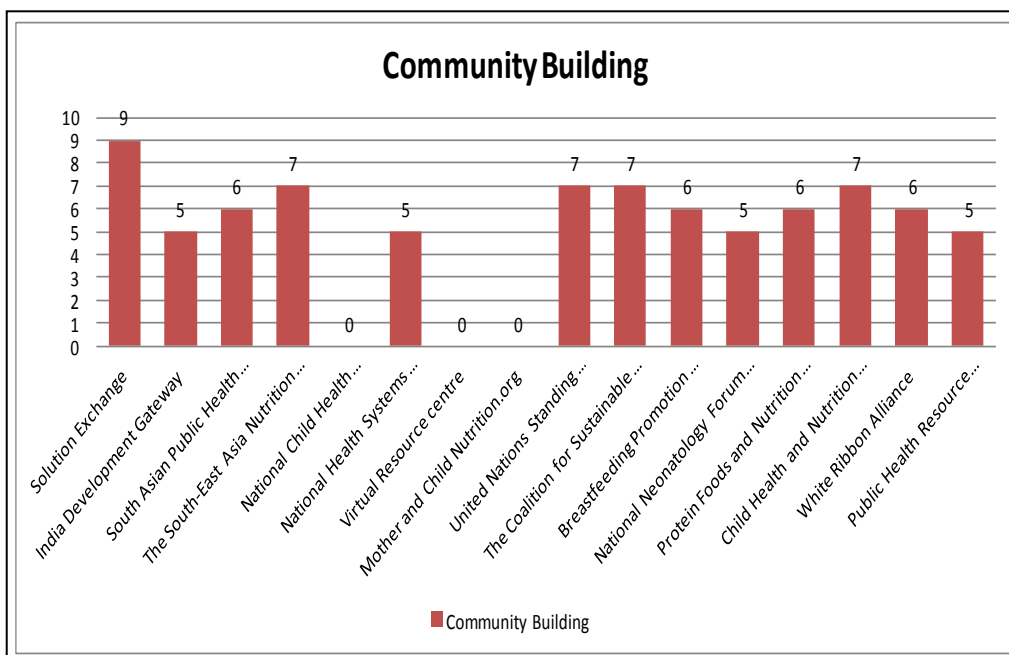
Under this function, the review looked at initiatives that promote a consultative process of knowledge sharing and bring various stakeholders having similar values and interest together under one umbrella—in this case, networks or groups of stakeholders working toward improving nutrition security in India.

There are many **community-building** and **convening** efforts with varied functions and approaches to bringing stakeholders together through physical and virtual networks. Only a few seem to be active, as detailed in the table below.

In summary,

- Of the 16 networks systems reviewed, 10 initiatives help to bring various stakeholders together face-to-face or on virtual platforms to discuss and learn key nutrition issues. Five are online networks, and five bring stakeholders together face-to-face.
- Participation of members could not be analyzed—although it was evident that moderated networks see more participation and discussion of issues, like Solution Exchange, and physical network like the Coalition for Sustainable Nutrition Security and South Asia Public Health Forum bring together divergent stakeholder views.
- There is a lack of integration of nutrition practitioners in health or agriculture.
- Six of the 10 networks support collaborative learning and action, and four networks play more of an advocacy role, such as the White Ribbon Alliance and BPNI.

Figure 2 Community building



Solution Exchange scored the highest in community building, followed by the South East Asian Nutrition Network, UNSCN, Coalition for Sustainable Nutrition Security, and Child Health Nutrition Resource Network. The review graded them as per the basic mandate of community building. The grading was done for a particular function from 1–10. The highest rated as 10 and lowest rated as 1, based on the operation of a function, for example. If the initiative is based on community building and it has demonstrated this, then it scored between 8 and 10.

**Table 2 Summary of scope, stakeholders reached, and effectiveness of the knowledge networks and systems**

Network/System	Scope	Stakeholders reached	Details with evidence of effectiveness (if found)
<b>Solution Exchange</b>  (Food and Nutrition Security Community and the Maternal and Child Health Community)  Since 2005	National, Online	500 nutrition/health/food security practitioners	An online initiative of the United Nations Country Team in India has demonstrated an effective community building function by enabling a wide group of practitioners to gather discussions on various policy to programmatic issues. The network has an active membership of more than 5,000 members who regularly engage in “responses/discussions, etc.” Rated to be the most widely-used network for eliciting views on key issues relating to ICDS, MDM, fortification, breastfeeding etc. Dedicated Moderations team
<b>United Nations Standing Committee on Nutrition</b>  Since 1977	Global, Face-to-face, and Virtual	Community of global nutrition practitioners, policymakers, and experts?	Another network that stimulates dialogue among the members of the global nutrition community of practice and facilitates contacts among its members. Through the NUT-WORKING page, the UNSCN aims to help solving nutrition problems and to provide platforms for obtaining valued opinion on nutrition-related issues.
<b>South Asian Public Health Forum (SAPHF)</b>  Since 1999	South Asia, Virtual	700 public health practitioners	Has been successful in bringing public health practitioners together on a shared platform to communicate and deliberate on health issues across South Asia. Being a voluntary network, it has succeeded in bringing 700 stakeholders together to share information and knowledge.
<b>Child Health and Nutrition Research Initiative (CHNRI)</b>  Since 2001	Global with India Chapter, Face-to-face, and Virtual	Scientists and implementing bodies	Brings together scientists and implementing bodies to discuss the current evidence and future requirements for global, regional, and national child health and nutrition. It plans to develop interest groups within the network by assembling technical experts who share common areas of interest.
<b>White Ribbon Alliance</b>	Global, Virtual	National and International members	Reaches all national and international members with special announcements, information on new technical resources and publications through an email group. Events and updates on member's activities are disseminated periodically. It also lobbied with the Government of India to declare April 11 as National Safe Motherhood Day in 2003 and organizes advocacy events around selected campaign themes each year.
<b>Public Health Resource Network (PHRN)</b>	Virtual	Individuals/organizations concerned with health equity	This network is reaching out to dedicated individuals and organizations for which health equity is a major concern, and providing them access to

<b>Since 2005</b>			essential information and opportunities to contribute to this goal through e-group.
<b>India Development Gateway</b>	National, online	Health, nutrition, and maternal and child health practitioners?	IDG enables sharing among people on identified issues in the Discussion Forum. It is a web-based application for holding discussions and posting user-generated content. There have been about 70 discussions under the health section, which covers both maternal and child health. However, the last submission was in 2008.
<b>Since 2006</b>			
<b>The Coalition for Sustainable Nutrition Security</b>	Face-to-face	Nutritionists	This coalition has emerged as a strong network under the leadership of M S Swaminatham, building a community for nutritionists. It is not an online community, but a physical group of various stakeholders who meet as per the coalition activities. The coalition was successful in developing the Leadership Agenda for Nutrition, which was being considered by the State Governments.
<b>Since 2007</b>			
<b>The South-East Asia Nutrition Research-Cum-Action Network</b>	Regional (South East Asia), Virtual and face-to-face	National Institute of Nutrition (NIN), Hyderabad, India; M S University, Baroda, India, represent India	High-level committee that comes together for advice/action and to enable government to get involved in consultative policymaking processes at a regional level. This network meets annually, shares expertise; provides technical assistance, training, fellowships, and equipment; and identifies priority research issues, funds research projects, and collaborates in carrying out multicenter studies. It is facilitated by the World Health Organization.
<b>Since 1980</b>			
<b>Breastfeeding Promotion Network of India (BPNI)</b>	National	Individuals and organizations in India interested in topic of breastfeeding	This is a network of individuals and organizations at various levels in order to raise the awareness and importance of breastfeeding to the grass roots. Membership to the community is paid.
<b>Since 1991</b>			
<b>National Neonatology Forum, India</b>	National	National institutions working on improving neonatal care	This is a network of institutions working on improving neonatal care in India. NNF assisted the government in developing the Essential Neonatal Care (ENC) package (consisting of resuscitation, prevention of hypothermia and infection, exclusive breastfeeding, and referral of sick newborns).
<b>Since 1980</b>			

<sup>a</sup> The information has been sought from individual websites.

## 5.2. Filtering

The table below provides an overview of how different initiatives are making relevant nutrition-related content accessible to their audiences.

**Table 3 Details of content management**

Initiative	Details of how they filter and organize content <sup>a</sup>
<b>Repository on Maternal Child Health</b>	Gateway to information on Maternal Child Health, which aims to provide a nationwide platform for professionals in child and public health to come together and strengthen the discourse on child health.

<p><b>Developed by the National Child Health Resource Centre (NCHRC)</b></p> <p><b>Since 2007</b></p>	<p>Provides a comprehensive “National Repository” that collects, manages, and disseminates information on child health and related maternal health issues at a single place.</p> <p>Number of Resources NCHRC  Diseases (203)  General Information (191)  Immunization (190)  Maternal Health (210)  Newborn Child Health (283)  Nutrition (216)</p>
<p><b>National Health Systems Resource Centre (NHSRC)</b></p> <p><b>Since 2008</b></p>	<p>Works with the state and districts for strengthening the health systems and planning. In this process various protocols, formats, training materials, and reports from field visits and operational research/studies are developed by NHSRC. These outputs are classified here as NHSRC's Contribution. In addition, they also collate information, research, and reports from other sources, which are classified as Reference Material. These resources are presented under appropriate themes for easy reference.</p> <p>Number of Resources NHSRC  Communicable Diseases (36)  Community Processes (106)  District Health Action Planning (23)  Financing and PPP (10)  Health Sector Overview (79)  Human Resources for Health (18)  Informatics (HMIS) (48)  Legal Framework of Health (1)  Medicine and Technology (1)  Non-Communicable Diseases (7)  Nutrition (22)  Public Health Administration (1)  Public Health Planning (22)  Quality Improvement (1)  Reproductive and Child Health (39)</p>
<p><b>Virtual Resource Centre</b></p> <p><b>Supported by Ministry of Health and Family Welfare</b></p>	<p>Provides access to advocacy and communication material related to issues such as population, gender, mother, infant and child health, sexuality, reproductive health, HIV/AIDS, declining sex ratio, women's rights, nutrition, adolescent health, sexual violence.</p> <p>Materials are available as per themes and also format, print, audio, and visual. The VRC recorded 253,956 visitors as on January 2012.</p> <p>Aims to provide a resource base that can help further the dialogue and enhance understanding on any or all the above issues among different audiences.</p>
<p><b>Mother and Child Nutrition.org</b></p>	<p>Provides resources with huge datasets and information on the nutrition status and programmatic impact, including nutrition interventions.</p>
<p><b>UN Standing Committee on Nutrition (SCN) website</b></p>	<p>Website gets about a million hits a year.</p> <p>A central feature on this new website is the SCN “One-Stop-Shop” Food and Nutrition Resource Portal, which will provide an online library of resources in food and nutrition. This portal is aimed at a global audience but has not launched yet.</p> <p>As part of its advocacy and communication mandate, the SCN is producing and disseminating a series of publications, including SCN News, Nutrition Information in Crisis Situations (NICS), Reports on the World Nutrition Situation and Nutrition Policy Papers. These publications are reaching some 10,000 nutrition practitioners, program managers, and development workers around the world.</p>
<p><b>India Development Gateway</b></p>	<p>IDG organizes information in various categories under the health section for easy access, but does host a range of materials. There are about 1,120 visitors to the page to date.</p>

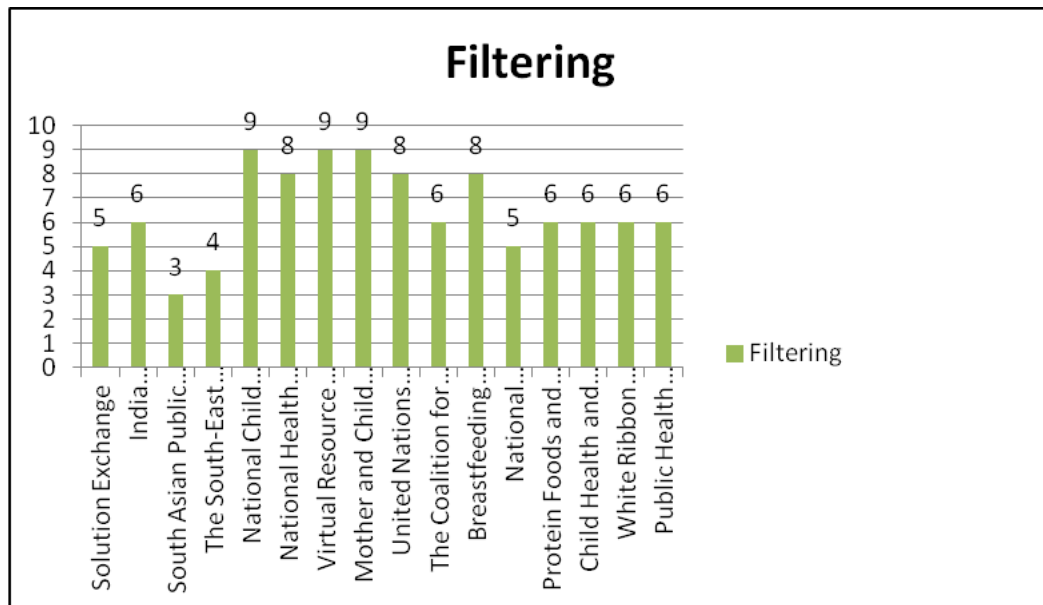
<b>Breastfeeding Promotion Network</b>	The network provides Articles, Presentations, Important and Helpful FAQ's and Facts on Breastfeeding. The National Neonatal Forum provides a Neonatal Perinatal Database including International Guidelines for Neonatal Resuscitation, with an average 138,873 visitors per day.
<b>Solution Exchange</b>	Although does filter content as per members need, this is only made available to members through consolidated replies issued for each discussion, news digest (provides an update on the sector from media), query update (a mid-query update to keep the community discussions in track), community update, discussion outcomes.
<b>National Institute of Nutrition</b>	Provides a catalogue of a range of publications available that are priced.
<b>Nutrition Foundation of India and National Institute of Public Cooperation and Child Development (NIPCCD)</b>	Hosts a range of research papers and information sheets, which are more developed in-house than collated from different sources.
<b>PRS Legislative Research</b>	PRS Legislative Research deepens and broadens the legislative process by providing MPs the information they need for debates in Parliament.

<sup>a</sup> There is no proper content organization followed by any system and the review did not focus on the quality of content provided.

Key points from the overview in the table:

- Information from a range of thematic areas are covered and made accessible by various initiatives, but there is not much linkage between them.
- There seems to be a multiplicity of efforts between NCHRC, VRC, NHSRC (all supported by the Ministry of Health and Family Welfare) that have developed different portals to enable access to information on maternal and child health. In addition, there are initiatives like Mother and Child Nutrition, BPNI, PHRN and more.
- It is difficult to ascertain which audiences are accessing this content.
- Nutrition focused content is highlighted by the UN (although for a global rather than Indian audience) and Mother and Child Nutrition and UN Solution Exchange—others focus more on health, with nutrition forming only a small part of this content.

Figure 3 Filtering



The National Child Health Resource Centre scored the highest in filtering followed by the Virtual Resource Centre, and Mother and Child Nutrition, followed by the Breastfeeding Promotion Network in India, UNSCN, and National Health Systems Resource Centre. The review graded them as per the basic mandate to seek, filter, and make the knowledge available online.

### 5.3. Facilitating (and learning)

A few of the networks and systems analyzed play some role in facilitating and learning, particularly in promoting peer-to-peer learning, linkages, and capacity building of network members.

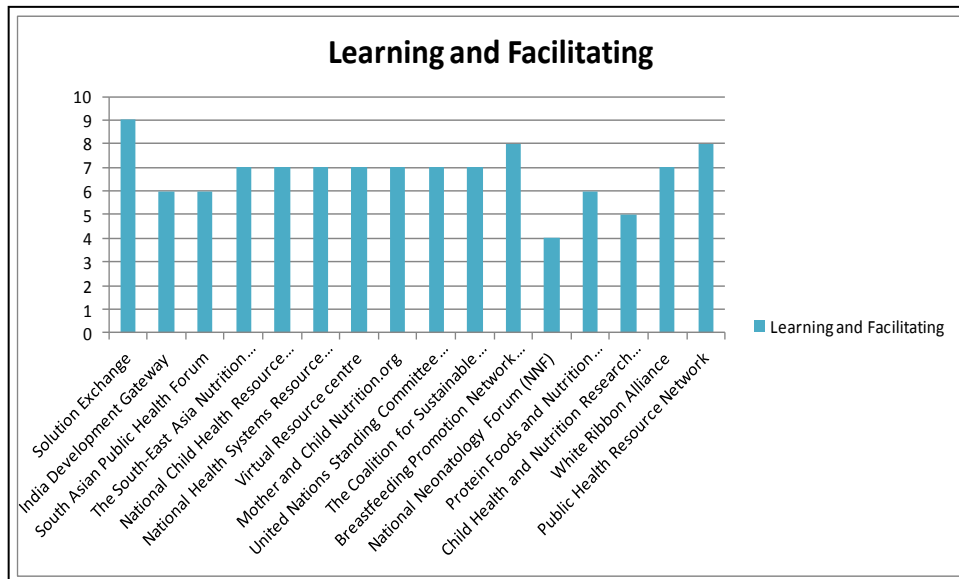
**Solution Exchange** actively encourages practitioners, researchers, and policymakers to reflect on what they are doing and seeks input from other people. The testimonials reflect that there are many members who do not appear to be engaging, but who, in fact, are drawing a lot of benefit from the content shared by the active members.

**The South-East Asia (SEA) Nutrition-Research-cum-Action Network**, established by the WHO Regional Office for South-East Asia, aims to optimize regional expertise by way of linking nutrition research to country operational programs in order to address existing nutritional problems prevailing in the region.

**Public Health Resource Network** has distance learning program aims to strengthen technical capacities at district and state levels to support processes that lead to achieving the NRHM's goals.

Also, networks such as the Regional Resource Centers, Breastfeeding Promotion Network of India, and NIPCCD support capacity building of frontline workers.

Figure 4 Learning and facilitating



While all networks/systems scored well in facilitating learning, Solution Exchange scored highest, followed by BPNI and PHRN. The other initiatives do facilitate information availability, but the effectiveness of learning could not be measured.

The review found it challenging to differentiate between the filtering function and facilitate function.

#### 5.4. Amplification

Here the review looked at initiatives that have been encouraging awareness on certain issues rather than a function of amplifying in particular.

Amplification is not very prevalent, but where it is present, it does serve as a medium for discussing little understood issues and taking key pertinent issues forward. However, these services do not appear to be actively followed – hence, it is difficult to assess their effectiveness.

The following initiatives seem to be promoting amplification of issues in these various ways:

- The **Breastfeeding Promotion Network** is actively involved in influencing policy and program decisions through awareness-raising programs on breastfeeding and their virtual presence.
- The **National Neonatal Forum** is assisting the government, WHO, and UNICEF in adapting the Integrated Management of Childhood Illness (IMCI). The draft Indian version of IMCI is christened Integrated Management of Newborn and Childhood Illness (IMNCI), underlining the added emphasis on the neonatal component.
- The **Mother and Child Nutrition** trust highlights key nutrition issues by communicating on its current status and sharing key reports.
- **Coalition for Sustainable Nutrition Security** has developed a Leadership Agenda for Action that informs and provides key action points toward working on reducing malnutrition.

- **White Ribbon Alliance** members worldwide have been utilizing champions and public figures to raise awareness about maternal health. The Right to Food Campaign falls well in this category of advocating the nutrition agenda in the food security bills and in other schemes of the government.

### 5.5. Investing and providing

There seemed to be very low intent in **investing** in a collaborative manner to take forward suggestions or learning outcomes.

The following two organizations have the strongest focus:

- **Child Health and Nutrition Research Initiative (CHNRI)** undertakes systematic environmental scanning for identifying available funding options in child health, nutrition, and maternal health. It funded three regional initiatives in Africa, Asia, and Latin America to develop regional profiles by identification of regional child health and nutrition (CHN) research agendas and mapping of actors, i.e., individual researchers, organizations, universities, and groups, and their roles in the field of child health and nutrition within a region. **Protein Foods and Nutrition Development Association of India (PENDAI)** tries to promote high quality food products that are nutritious and safe. The seal of approval is given after the product/available data are analyzed, to ensure that the product meets the above criteria and the nutrients declared on the label are validated.
- Also under the **South-East Asia Nutrition Research-cum-Action Network**, WHO provides the resource support for the member countries to carry out research on priority issues to be considered with national context.

### 5.6. Summary overview of findings

The table below summarizes the degree to which each system/network contributes to the NFA functions, ranging from green (strong) to red (absent or weak). We have circled the key “strong” or “medium” levels of focus in these areas.

**Table 4 Scoring of the knowledge system and network to the functions of NFA framework**

Initiative	Community Building	Filtering	Amplifying	Learning and Facilitating	Investing and Providing	Converging
Solution Exchange	9	5	5	9	5	8
India Development Gateway	5	6	3	6	3	7
South Asian Public Health Forum	6	3	7	6	7	5
The South-East Asia Nutrition Research-cum-Action Network	7	4	6	7	3	7
National Child Health Resource centre (NCHRC)	0	9	4	7	6	7
National Health Systems Resource Centre (NHSRC)	5	8	4	7	6	6
Virtual Resource centre	0	9	5	7	4	7
Mother and Child Nutrition.org	0	9	5	7	5	4
United Nations Standing Committee on Nutrition	7	8	7	7	7	8
The Coalition for Sustainable Nutrition Security	7	6	5	7	5	6
Breastfeeding Promotion Network of India	6	8	8	8	5	7
National Neonatology Forum (NNF)	5	5	6	4	2	6
Protein Foods and Nutrition Development Association of India (PENDAI)	6	6	6	6	7	7
Child Health and Nutrition Research Initiative (CHNRI)	7	6	6	5	7	8
White Ribbon Alliance	6	6	6	7	0	7
Public Health Resource Network	5	6	0	8	6	7
		Strong		Medium		Weak

As it is evident from above, most of the knowledge systems and networks do have a convening function, followed by the objective of facilitating learning, which is done by providing the required information filtered as repositories, while few of them facilitate generation/sharing of this knowledge through bringing stakeholders together on a discussion platform as a community of practice or discussion forums.

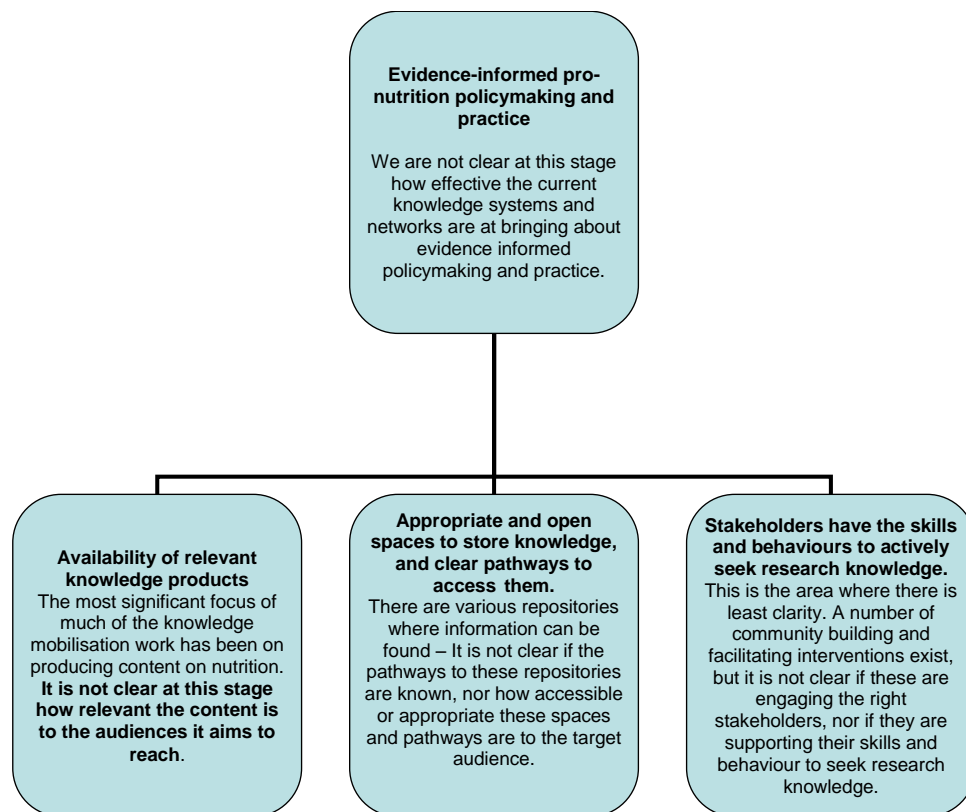
The table below summarizes the key highlights of the initiatives reviewed; it provides the strengths and weakness of each initiative, including impact wherever possible.

**Table 5: Summary of strengths, weaknesses and evidence of impact**

Initiative	Strengths	Weaknesses	Evidence of impact
<b>Solution Exchange</b>	Knowledge sharing, moderated, UN-led	Content repository	Is the only virtual platform for knowledge sharing. Sought for policy and program inputs
<b>India Development Gateway</b>	Content organization, collaborative, DIT-led	Knowledge sharing, reach	Testimonials indicate information has been found useful.
<b>South Asian Public Health Forum</b>	Knowledge sharing	Content repository	
<b>South-East Asia Nutrition Research-cum-Action Network</b>	Policy influence	Research focused	Supported in influencing national nutrition programs
<b>National Child Health Resource Centre (NCHRC)</b>	Content organization, government-led	Knowledge sharing	
<b>National Health Systems Resource Centre (NHSRC)</b>	Content organization	Knowledge sharing, collaborations	Nodal Technical Support Agency for NRHM
<b>Virtual Resource Centre</b>	Content organization, content format	Knowledge sharing	
<b>Mother and Child Nutrition.org</b>	Content repository	Knowledge sharing	
<b>United Nations Standing Committee on Nutrition</b>	Collaborative, knowledge sharing, content organization	Global	
<b>Coalition for Sustainable Nutrition Security</b>	Collaborative	Sharing, content repository	Nutrition Agenda for Action
<b>Breastfeeding Promotion Network of India</b>	Grass-roots reach	Sharing, content repository	Program influence
<b>National Neonatology Forum (NNF)</b>	Collaborative		NNF assisted the government in developing the Essential Neonatal Care (ENC)
<b>Protein Foods and Nutrition Development Association of India (PENDAI)</b>	Collaborative, nutritive product influence	Outreach, sharing	Product certifications for nutritious foods
<b>Child Health and Nutrition Research Initiative (CHNRI)</b>	Evidence-based research	Content repository	Influence policy through research
<b>White Ribbon Alliance</b>	Policy influence	Virtual sharing	Lobbied with the Government of India to declare April 11 as National Safe Motherhood Day in 2003.
<b>Public Health Resource Network</b>	Capacity development	Virtual sharing, repository	NRHM focus

The following figure summarizes our tripartite overview.

Figure 5 Summary of findings



## 6. KEY CONCLUSIONS AND IDENTIFICATION OF POTENTIAL GAPS

The review of knowledge systems and networks has enabled us to identify the principle knowledge systems and networks and the roles they play in mobilizing knowledge relating to nutrition. It has provided a broad overview of coverage, focus, technology, and in a few cases, effectiveness. The review was able to draw the following conclusions and identify a few potential gaps that could be looked into during the audience research.

1. The knowledge services largely focus on generation and accessibility; it is not yet clear if decisionmakers use this content and from where, how relevant or useful this content is for decisionmakers, and whether there are any technology/infrastructure barriers to accessibility of content at the state level or even the national level. The audience research will help to answer some of these questions.
2. Most of the content is in English. Is multilingual access of information desirable?
3. It was unclear how regional initiatives are feeding in to national priorities and program and policy decisions.
4. The content reviewed found greatest focus on health-related information—how can nutrition be integrated to these initiatives to help gain attention? Or, how can nutrition be highlighted as a key topic?
5. There is a gap between those services that bring stakeholders together and promote sharing, and those that produce or store knowledge. Initiatives that have been able to bring varied stakeholders together

have not been able to build a knowledge repository, and initiatives that have built in a strong resource base lack sharing.

6. Multiplicity of efforts like NCHRC, VRC, and NHSRC, which are all supported by the Ministry of Health and Family Welfare, have developed different portals to access information on maternal and child health. Would there be benefits in increasing linkages, and if so, would this be possible? In addition, there are initiatives like Mother and Child Nutrition, BPNI, PHRN, and more.
7. At places, the review felt that the sector faces conceptual challenges in terms of lack of clarity on terms, multiple conceptual frames, lack of agreement on main issues, and lack of understanding on how to work across disciplines; probably this is one of the reasons for the multiplicity of efforts. For example, one set of practitioners promotes food-based approaches toward improving nutrition, while another focuses on fortification of food.
8. In terms of accessibility of online resources, it is open; few networks have paid membership fees or go through a system of formal enrolment of members through agreed terms.
9. This review has focused on the knowledge mobilization mechanisms that we think best relate to policy-making audiences. It has not explored what mechanisms are in place to facilitate mobilization of knowledge from the national to regional and local level.
10. It is important to note that it is not clear at this stage just how much engagement and exchange there is between these two groups of organizations/services. If the audience research reveals that there is limited engagement, then this could be a significant gap. The networks that showed active engagement among members are facilitated by dedicated moderators who facilitate this process.
11. Overall, none of the initiatives, except the UNSCN, fulfilled all the functions of a network. This is a global initiative; how Indian stakeholders find a space and participate is not clear. The rest of the initiatives did fall strong in one or two functions of the NFA.

## 7. BARRIERS AND CHALLENGES TO THE DESK REVIEW

The desk review found it **challenging** to evaluate the effectiveness of each system/network in terms of their influence in policy and program decisions, or even in terms of their effectiveness at engaging stakeholders in their products and/or services. This is primarily because the review depended on the information available on the web and initiatives lacked documentation in terms of examples of impact.

It was not possible from this review to capture meaningful information on the role of members and their participation in the network or system.

It was also difficult to understand how the information/knowledge was sourced.

The quality of information/knowledge made available could not be judged.

Since there is a very thin line between health and nutrition interventions, all the initiatives looking at health interventions were also included.

The uptake and demand for nutrition-related knowledge and in what format could not be assessed from the various interventions provided—however, where it has been possible to draw conclusions, we have done so.

The stakeholder mapping and audience research will play an important role in complimenting this information, by providing the perspective of users (or potential users) of these resources.

Similarly, without fully analyzing how policy and practice decisions are made, and what influences decisionmakers, it is difficult to make any assumptions about the current effectiveness of these networks/systems in affecting change.

The stakeholder mapping has already identified some of the key players in the influencing agenda. However, as the process of political influence becomes clearer (through the audience research and field research), we might see that, in fact, we can be most effective at influencing change by mobilizing knowledge with civil society players. This, as yet, remains to be seen—but if it is the case, and if we have the capacity to respond, we may need to consider the approach we would take to mobilizing knowledge with these audiences.

We also need to consider other mechanisms/means through which decisionmakers engage with knowledge and information (media, etc.) and make sure that we are considering these when we develop our knowledge mobilization strategy.

Due to the focus having been on national-level networks/systems, we cannot at this stage assess how significant or effective state-level systems/networks might be in informing state-level policymaking and practice.

The majority of these missing aspects will be reviewed through stakeholder mapping and audience research, which will give a richer sense of what people are using (or not) and what they value and might use/engage with in the future as a knowledge system.

## 8. RECOMMENDATIONS FOR EXPLORATION

### 8.1. Key Questions to Factor into the Audience Research

For knowledge systems/networks:

- What are current levels of understanding of knowledge mobilization?
- What role have knowledge mobilization organizations been able to play in policy and program influence (if they have this information?)
- How much of their online content is accessed? Is the quality of content provided satisfactory?
- Expanding the role of the Food and Nutrition Board, National Rural Health Mission

For policymakers and practitioners (in addition to those already envisaged through earlier planning processes)

- What (nutrition-related) networks do people participate in (and how often?) and which ones do they find most important/useful? (And why?)
- What systems/repositories do people use (again how often) and find beneficial?
- How do they prefer to access/engage with knowledge products (and services)?
- Has their engagement with a knowledge system/network played a role in influencing any of their policy/program decisions?

### 8.2. Key Considerations for the Knowledge Mobilization Strategy

- We need to look at knowledge mobilization at regional, national, state, and district levels.

- What sorts of infrastructure are needed to support more effective knowledge mobilization?
- So far, much effort has gone, as noted, into making research more available in various ways, but it is already clear that this will not be enough. However, how can we engage with these existing repositories and ensure that the knowledge generated through this program is included?
- What role can we play in bridging the potential gap between the generated knowledge and the engagement with it by priority stakeholders?
- What kinds of capacities, systems, resources, and relationships should be built?
- What needs to be done to improve our knowledge about knowledge mobilization in the Indian context? What research tools, practices, and protocols need to be developed? What kinds of data are required and how can they best be obtained?
- How can we support capacity development of knowledge mobilization actors in order to promote more effective and sustainable good practice?

Many of the above questions have been dealt with in the stakeholder research interviews detailed in Section 2 of this report.

## 9. LESSONS FROM THE DESK REVIEW

- We have seen from this process that it is difficult to demonstrate the effectiveness of any of these networks/systems by this process alone.
- The NFA methodology, although providing some useful insights, may be too nuanced in relation to the level and quality of information we have been able to gather.
- There may be benefits in revisiting some of the findings from this review once the audience research is complete.
- Many initiatives probably lacked the updating of their activities and achievements online, which hampered analysis.
- The function of amplification and investing did not fit well in the initiatives analyzed.

## SECTION 2 THE STAKEHOLDER RESEARCH INTERVIEWS

### 1. INTRODUCTION AND METHODOLOGY

Follow-up stakeholder research interviews were conducted with knowledge network conveners and program and policy decisionmakers. These aimed to address the information gaps of the networks and systems in the desk review.

The desk review found it challenging to evaluate the effectiveness of each system/network in terms of their influence in policy and program decisions, and in terms of their effectiveness at engaging stakeholders in their products and/or services. These follow-up interviews aimed to get a sense of who is using or not using these knowledge services/networks, and gather information that would help us understand how effective these services are at mobilizing knowledge for relevant audiences.

In particular, the interviews looked at understanding the audience reach, evidence of access, evidence of use, strengths and weaknesses, evidence of influence, evidence of effectiveness, and challenges with implementation of the knowledge networks/systems.

This section provides outcomes of findings from face-to-face interviews conducted with the knowledge network conveners. A total of ten networks/systems were interviewed. These were identified, based on the results of the desk review, as those that came out as effective in conducting knowledge mobilization activities, and also the ones that were popularly known among stakeholders (identified through stakeholder interviews). The interviews were conducted with the following conveners of KM Initiatives:

- Solution Exchange for the Maternal and Child Health Community—Meenakshi Aggarwal
- Solution Exchange for the Food and Nutrition Security Community—Gopi Ghosh
- Coalition for Sustainable Nutrition Security—Rajiv Tandon and Laxmikant Palo
- National Child Health Resource Centre—Rajesh Khanna
- National Neonatology Forum—Ajay Gambir
- Child Health Nutrition Research Initiative—N. K. Arora
- Virtual Resource Centre—Sushma Dureja
- Right to Food Campaign—Dipa Sinha
- Public Health Resource Network—Ganapathy
- India Development Gateway—Katheresan
- National Health Systems Resource Centre—T. Sundararaman, Garima

This section also briefly summarizes the findings of about 30 interviews with program and policy decisionmakers and influencers from government, civil society, and independent consultants, undertaken to understand the user perspective of the knowledge networks and system. It looked at awareness among stakeholders about these initiatives and their usefulness of these networks as a part of a larger process aimed at understanding the knowledge flows in the current policy environment.

## 2. INTERVIEW OUTCOMES

The results of the interviews with the knowledge network/system conveners have been provided to understand the purpose, audience reach, mechanisms adopted for access and use, processes to ensure quality of content, perceived strengths and weaknesses, effectiveness in influencing policy and programs, and the underlying challenges in achieving any of these.

### 2.1. Purpose

The interviews revealed various purposes and methods for knowledge mobilization. Virtual knowledge networks, like Solution Exchange, aim to “deliver knowledge” by providing a platform for development practitioners. Child Health Nutrition Research Initiative focuses on generation of “business ideas for research” for advocacy to decisionmakers. Coalition for Sustainable Nutrition Security is a physical network for “consensus-building” to create an agenda for collective action to improve nutrition and speak one voice. In addition, physical networks focused on developing “capacity” of frontline workers, such as National Neonatology Forum for newborn care. Public Health Resource Network imparts health training and runs courses for medical officers. The Right to Food Network, which functions as a physical and virtual network, works on a “campaign” based mode on emerging food and nutrition security issues.

The information repositories or knowledge systems provide the opportunity for stakeholders to share their findings, such as the National Child Health Resource Centre, which aims to “collate information” scattered in

organizational repositories. India Development Gateway works with grassroots-level partners for “content development” and outreach activities. National Health Systems Resource Centre primarily means to provide “knowledge resources” that are required to support decisionmaking for policies and strategies under NRHM. Virtual Resource Centre provides a range of information for frontline workers.

## 2.2. Audience reach

In terms of targeting policymakers and decisionmakers, the Coalition for Sustainable Nutrition Security came out evidently with a clear purpose of influencing policy. In contrast, most of the other initiatives focused on reaching practitioners from all sectors working on improving maternal child health nutrition (including public health practitioners aiming to improve program implementation).

The virtual networks have a free and open membership for anyone interested in participating in the issue, while the physical networks, such as the National Neonatology Forum and Public Health Resource Network, are more formal forums and charge a membership fee. The Right to Food Campaign (RTF) does not follow a formal system of memberships and is an informal network of individual organizations and other networks actors working at grass roots. Some states have formed their own states’ steering committees or state exhibiting committees, such as Gujarat State, which has *Ann suraksha adhikar abhiyan*, so is in Maharashtra.

The number of members varies from 150 in the coalition to about 3,000 members in some virtual platforms, and the physical networks reaching more than 2,500 members. Solution Exchange for the Food and Nutrition Security Community, with a membership of 3,000 members, focuses on the agriculture-nutrition connect. RTF is also a virtual network, with 3,000 members, and is trying to set up an SMS network.

The information repositories have a clear mandate of informing the program implementers and frontline workers. India Development Gateway (InDG) aims to reach out to “rural communities” through First Level Service Providers. The National Health Systems Resource Centre is very clearly a resource support for districts and for program management implementation. It did not see itself as a policy website, but certainly hosts enough information to be accessed.

## 2.3. Evidence of access

The information repositories popularly used Google analytics to monitor accessibility, while this was seen as weak in the networks. The National Child Health Resource Centre has been tracking access rates for the past two years and witnessed an exponential increase (200-250%) in their number of visitors. But lately, they have not been able to give much attention, due to other projects, which indicated a need for dedicated resources to update and monitor their systems. Solution Exchange for the Food and Nutrition Security Community also felt they lacked a robust system to enable accessibility tracking. India Development Gateway, which, again, uses Google analytics, monitors details related to users, demography, content, etc. Some gauge accessibility through references made by users in various meetings; for example, the National Health Systems Resource Centre heard about its usage at Harvard University in the U.S.

Lack of willingness to share, availability of information like government-issued guidelines, large file sizes, and lack of awareness regarding availability of information were some of the barriers to access. CD-ROMS are created to enable access, which again faces barriers to reaching district levels.

The knowledge networks maintain member profiles, but the usability of discussions and content is difficult to track. They are often forwarded by members to their networks. In terms of usage and responses received, it varies, depending on the initiator of discussions and the final use of inputs; on average, each discussion receives about 30 responses.

Solution Exchange for the Maternal and Child Health Community has not been able to assess why people have not been able to use it. A recent member feedback survey revealed that the knowledge products have been useful to a limited extent, information overload was a concern, and lack of time to go through the discussions was another reason. People in decisionmaking do not access it much, either because of unwillingness to use the information or perform in capacity. But some key experts do respond to a query when requested; for example, the guidelines on mother and baby friendly initiatives developed by AIIMS and UNICEF received very effective responses.

The National Neonatology Forum has made many efforts to disseminate information offline through newsletters and bulletins, but only 10 percent of people are actively giving feedback on the usefulness and usability of information provided or contribution to the newsletter. Recently they have assigned a dedicated resource for managing the website updating information and linking with members. The Child Health Nutrition Research Initiative initially had a hit rate of 10-12 per day and when discussion forums were run in a structured manner, the hit rate increased to 100. The INCLN website was restructured and began doing an environment scan for research opportunities. They now have a full site, with a lot of material for research methodology, and their hit rate has increased to 500. The Right to Food Campaign is active on Facebook and updates its site regularly, but does not have a formal tracking system. PHRN usually gets feedback on access through face-to-face meetings.

#### 2.4. Evidence of use

Solution Exchange (SE) for the Maternal and Child Health Community tried to collate case studies to see the usage of the discussions. There is some evidence of how the discussions are being used. But these have to be collected; very rarely do members get back or there is often a time gap from the discussion to usage. The number of contributions varies based on the queries, but there are several examples of use. For example, members' inputs were used for developing cost-effective sanitary napkins and there was improved implementation of anemia control programs in the UP state.

*'I have been keeping copies of SE for the last five years - I have a file but I don't respond'...there are people who say, 'every time I have a presentation, I go through your (SE) material because you have so much stuff'.*

The National Neonatology Forum uses a face-to-face feedback mechanism to assess usage and follow up on the trainings conducted by the network. The Child Health Nutrition Research Network is used, but faced with the issue of lack of member's interest and participation in the discussions, which fade out with time. The Leadership Agenda for Action developed by the Coalition for Sustainable Nutrition Security is widely used by the Planning Commission and Prime Minister Council on Nutrition Security. The block development plan is also considered as a model for implementation by the commission, but it was mentioned that although these are used, they are often not acknowledged.

It was difficult to track usage among repositories, again due to a lack of feedback mechanisms. NHCRC has received many requests for the Ministry's guidelines from state-level program managers, although it was

surprising that they did not have access to this. Even the Planning Commission was not aware of NHCRC; Professor Sethi requested some resources for a colleague at the Planning Commission, which were all available on the site, and, on use, they received a beautiful email from the Planning commission saying, “it was a wonderful initiative.”

The India Development Gateway receives regular feedback from users, which is provided on the site, and also collects feedback through its outreach partners in various states and through a periodical survey conducted through online and mailing lists.

The Right to Food Campaign receives a lot of requests for materials. Although it is difficult to track usage, they know that it is used a lot, based on the consumption offline at the district level and block level; the campaign is used a lot in advocacy. For example, the Chhattisgarh groups are very active on the Public Distribution System and Integrated Child Development Scheme, so if anything is happening related to this, they get a huge group using the materials. But again there is no formal mechanism to assess usage; it comes through from ad hoc requests and feedback. Similarly, PHRN provides content directly to NHCRC, and most of the materials are used for trainings.

**2.5. Strengths and weaknesses**

The interviews looked at what the conveners perceived were the strengths and weaknesses of the knowledge systems/networks. These are outlined in the table below.

**Table 5 Perceived Strengths and Weakness**

Virtual Network	Strengths	Weakness
<b>Solution Exchange</b>	<ul style="list-style-type: none"> <li>• Free, impartial, UN platform</li> <li>• Apprises members of key happenings in the sector</li> </ul>	<ul style="list-style-type: none"> <li>• Only people who have infrastructure can take part</li> <li>• Sometimes members do not get engaged</li> <li>• Not enough content in local languages</li> <li>• Face-to-face set ups are probably more reliable</li> <li>• No one recognizes the efforts in running the community</li> <li>• It is constrained by resources and manpower</li> </ul>
<b>Child Health and Nutrition Research Network</b>	Focuses on the research agenda for investment by the government	Lack of willingness to share among members. It is always “give and take” and it is about what you get in return
Physical Network		
<b>Coalition for Sustainable Nutrition Security</b>	Ability to influence key stakeholders because of the leadership of Prof. Swaminathan	<ul style="list-style-type: none"> <li>• Difficult to build consensus</li> <li>• Difficult to maintain balance between individual and organizational agendas—“issue of egos and logos”</li> </ul>
<b>National Neonatology Forum</b>	<ul style="list-style-type: none"> <li>• Strength is the vision and dedication</li> <li>• Given neo-born its due attention</li> </ul>	<ul style="list-style-type: none"> <li>• Narrow outlook</li> <li>• Coordination and partnership need-</li> </ul>

	<ul style="list-style-type: none"> <li>• Contribution to policy influence</li> </ul>	ed to be able to reach to masses
<b>Right to Food Campaign</b>	<ul style="list-style-type: none"> <li>• It is truly elective</li> <li>• Played quite an important role in the legislation—e.g., the NREGA, now the Food Security Act, the Universalization of ICDS, MDM</li> </ul>	<ul style="list-style-type: none"> <li>• Very dispersed network</li> <li>• No full-time people</li> </ul>
<b>Public Health Resource Network</b>	<ul style="list-style-type: none"> <li>• The development of the training modules and running for five years</li> <li>• The creation of district and block plans for the respective departments, which was completely absent before</li> <li>• Creation of this critical mass of health workers</li> </ul>	<ul style="list-style-type: none"> <li>• Sustaining the effort is resource intensive</li> </ul>
<b>Information Repositories (Systems)</b>		
<b>National Child Health Resource Centre</b>	Focus is on operational guidelines and programmatic information, rather than individual research reports	<ul style="list-style-type: none"> <li>• Marketing—have not been able to disseminate information about the repository</li> <li>• Lack of resources to be effective and have impact—very small team, so reaching frontline workers is not an easy task</li> </ul>
<b>Virtual Resource Centre</b>	Extension materials are made available	Difficult to sustain, needs dedicated resources
<b>India Development Gateway</b>	Partners contribute content voluntarily; there is willingness to promote the portal in their localities	Poor infrastructure at the village level to access the portal, and very less dynamic content support
<b>National Health Systems Resource Centre</b>	<ul style="list-style-type: none"> <li>• Focus is district level</li> <li>• First-hand collection of data</li> <li>• Ability to influence</li> </ul>	Have not been able to try many features envisaged, such as discussion forums, etc.

## 2.6. Evidence of influence

The interviews aimed to assess if the knowledge systems/networks were contributing to a change in users' knowledge, attitudes, or practice... or had influenced policy/practice/program decisions. Findings are outlined in the table below.

**Table 6 Summary of evidence of influence on attitude, program and policy**

Type of influence/initiative	Change in knowledge, attitude, and practice of members	Program planning/influence	Policy/planning influence
<b>SE for the Food and Nutrition Security</b>	Convergence of Agrinutrition Sector initiatives, which otherwise ran in parallel.	Facilitated additional amount for introduction of GLVs on the MDM. NFI steered the action group. Contributed to the revision of the National Nutrition Guidelines led by NIN	Contributed to Rajasthan State Bio-fuel Policy
<b>SE for the Maternal and Child Health</b>	Members' survey revealed that members find the platform useful and help in increasing understanding of MCH-related issues.		Regular inputs to queries from planning commission, NIHFWS and influence on other intermediary to policy dialogue. For example, the role of BCC in Immunization, the PCPDNT Act.
<b>Child Health Nutrition Research Initiative</b>			
<b>Coalition for Sustainable Nutrition Security</b>	The acceptance to be one voice among the nutrition community	Developed the block implementation plans Developed Leadership Agenda for Action for nutrition security	Policy advocacy to adopt block as a unit; Planning Commission considers block as unit for implementation. Formation of state nutrition missions
<b>Public Health Resource Network</b>		PHRN played active role in district health planning in all the states. In Jharkhand, it was involved in preparing state PIPs and for social audits.	
<b>Right to Food Campaign</b>		Campaign works quite closely with the Supreme Court commissioner's office, so a lot of evidence is provided to feed into the national programs. Got many positive orders from the court—cooked meal operationalization in MDM, and Universalisation of ICDS.	Part of the 11th plan steering committees and working groups; formally brought a yellow book strategy for children under 6 for the 11th plan Revision of Right to Food Bill
<b>National Neonatology Forum</b>	The trainings have enthused many doctors to work on neonatal care now.	Contribute to the development of book on breastfeeding	NNF steered formation of National Newborn Policy, later Kangaroo mother care and facility-based newborn guidelines for Government of India. NNF is consulted for any government of India neonatal policy.
<b>National Child Health Resource Centre</b>	Influence on knowledge producers—Ministry (Child		

	Health Division), UNICEF, WHO, Ayeshama, NIPI, Jaipur, etc., have started sending all their documents: guidelines, the PMC guidelines, the HPMC guidelines, all made available.		
<b>India Development Gateway</b>	The offline CD on “Nutrition and Health” developed in association with NIN. ICMR helped people to understand the basic information related to nutrition.		
<b>National Health Systems Resource Centre</b>		Support in problem solving in terms of data management and accuracy of data in implementation of NRHM	The issues identified are provided as inputs for policy strategies.

## 2.7. Challenges

The challenges listed were pertaining to engaging members, prioritizing issues, and resources. Key challenges identified are highlighted below.

- *It can take much time and effort to get members to share, learn, and discuss together*—Members’ willingness to freely respond and share their knowledge came out as a critical bottleneck. It has taken enormous efforts for Solution Exchange to get members into a habit of sharing and learning. In addition, members’ ability to allocate time for this was a challenge, and removing people who have been inactive is tricky. Policymakers and decisionmakers are often resistant to participate in the discussions and researchers/implementers can remain in their own silos. One big issue is that people are reluctant to share ideas, due to fear of having their thoughts not accepted.
- *It is challenging to cater for a diversity of members*—In a network it is not possible to satisfy all members and the moderator or convener has to manage expectations around this. Members can drive topics of discussions and agenda's in various directions, as they have their own priorities—the challenge for the convener is to ensure the network has a balanced outlook. Consensus building is also a challenge.
- *Resources for this type of work are low and unrecognized*—Dedicated staff are required to run these networks but often do not get the warranted attention or resource allocation from respective organizations or donors. The initiatives seem to struggle to meet the needs of personnel, lack the resources for creativity and mobilization activities such as face-to-face to events. A change in leadership can also affect the value placed on KM initiatives, depending on the individual leaders’ interests and priorities.
- *Knowledge repositories face challenges in communicating evidence for their audiences that is engaging and relevant*—The knowledge repositories making efforts to provide a range of materials with titles and abstracts face communication challenges in presenting evidence to expert groups that are both catchy enough and include all the relevant information needed.
- *Turning decentralization ambitions and extending the reach of information is a challenge*—Some knowledge systems/networks have decentralization ambitions, but lack control, and links between the national and district level to ensure that information reaches out. Some are also based in weak host institutions, allowing this to happen.

## 2.8. The Stakeholder Interviews

In addition to interviews with knowledge conveners, a number of Stakeholder Research Interviews were conducted with key stakeholders to find out their perspectives on the nutrition-related knowledge systems and networks. From the list of 24 networks/systems reviewed, the SRI's revealed very low awareness among stakeholders regarding these and very few seemed to be actively used. There were only a few that were known to most.

The following networks/systems came out as evidently known among stakeholders, but not frequently visited:

- Breastfeeding Promotion Network of India (BPNI)
- Coalition for Sustainable Nutrition Security
- India Development Gateway (InDG)
- National Child Health Resource Centre (NCHRC)
- National Health Systems Resource Centre (NHSRC)
- Solution Exchange
- National Neonatology Forum (NNF)
- Public Health Resource Network (PHRN)

In terms of participation in the knowledge networks, this was a rare feature among the government; but it was admitted that discussions were read and even shared among colleagues. The discussions among the Solution Exchange communities, in particular, were found to be useful. The stakeholders who influenced program and policy decisions did participate in the discussions, but, at times, found communities managed by moderators do not carry all that they may want to know. Some of their concerns include the following:

- It was felt that communities are often not focused and a range of issues are discussed that may not be of interest
- The email load was a worry—following the discussions is time consuming and is beyond their assigned work
- Discussions are repeated and sometimes outdated, which leads to members losing interest
- There is a lack of dialogue on basic issues, such as what nutrition interventions, why is it important, networks need to focus on basic issues to bring greater clarity to the topic of health/nutrition

Some of the preferred modes for knowledge sharing are as follows:

- Face-to-face rather than virtual forums
- Structured meetings held at regular intervals
- Meetings that ensure participation from the government—this was found to be key for sustaining interest and providing information
- Snippets of dependable information to overcome the email overload issue
- Hard copy reports over email exchanges
- Information made available in local languages to ensure state-level participation
- Sharing good practices, newsletters, and research publications

In addition, to improve the existing efforts of knowledge mobilization, a number of constructive suggestions to improve the knowledge mobilization work were identified:

- Networks need to highlight evidence that is not known, as opposed to what is already known about nutrition

- Potential collaboration among networks is needed, so that there is one platform rather than multiple discussions happening in parallel
- A common portal or internet site that disseminates information on all aspects of nutrition is desirable, taking advantage of the proposed National Nutrition Portal
- A network at the district level would be more meaningful for implementation

Overall stakeholders were part of a few of the knowledge networks and used the repositories for information, but mostly relied on published information sources from government or international journals.

### 3. REFLECTION AND CONCLUSIONS

The overall perspectives of KM conveners and program and policy decisionmakers on the nutrition-related knowledge networks and systems in India are highlighted below.

#### 3.1. Audience reach

As highlighted in Section 1, the knowledge networks and systems are reaching thousands of people, including nutrition, health, and food security practitioners; experts; policymakers; national and international bodies. The Coalition for Sustainable Nutrition Security has a clear purpose of influencing policy actors, but, in contrast, most of the other initiatives focus on reaching practitioners from all sectors working on improving maternal and child health nutrition (including public health practitioners aiming to improve program implementation). Member figures within the networks vary from 150 in the coalition to about 3,000 members in solution exchange, and the physical networks reaching more than 2,500 members.

#### 3.2. Evidence of access

It was difficult to get an overview of how the systems and networks were accessed through the interviews—some examples of website hit rates and discussion statistics were given, but not enough to enable comparison across the services. Discussion statistics seemed to vary, depending on the initiator of discussions and final use of inputs; on average, each discussion received about 30 responses. In terms of monitoring accessibility, the levels to which this was done varied across services. This was seen as weak in the networks—the information repositories popularly use Google analytics and the knowledge networks keep a record of member profiles.

#### 3.3. Evidence of use

Evidence of how the knowledge shared by the networks/systems is being used is not complete, due to limited use of feedback mechanisms to monitor access and capture feedback. Ad-hoc feedback on use and usefulness tend to get tracked through meetings. The feedback that has been received does show that the knowledge repositories and networks are useful and valued. For example, members' inputs in Solution Exchange were used for developing cost-effective sanitary napkins and there was improved implementation of anemia control programs in the UP state. The interviews showed that government, policy/program decisionmakers do not tend to participate in online discussions, but do read them. Generally, the usability of discussions and content is difficult to track, as people are too busy to provide feedback, discussions are often forwarded by members to their networks, and subsequent impact is not tracked.

The user perspectives revealed that there was awareness regarding these KM initiatives, but limited usage. More seemed to use personal networks to seek information, and also found it time consuming to take part and engage in networks, as there is information overload and, at times, repetitive and outdated content. A common portal that disseminates information on all aspects of nutrition was desirable. Overall, stakeholders were a part of a few of the knowledge networks and used the repositories for information, but mostly relied on published information sources from government or international journals.

### **3.4. Evidence of influence**

Most of the networks and systems and goals have focused on knowledge dissemination and exchange; only a few have explicitly focused on policy influence, e.g., the Coalition for Nutrition Security and the Right to Food Campaign. Some initiatives, such as Solution Exchange, have aimed to promote knowledge exchange, but have subsequently influenced policy and programs. There are some good examples of policy influence, e.g., influencing policy processes and policies through knowledge inputs (see table on page 30), although more examples of program influence have been observed. The Coalition for Sustainable Nutrition Security, in particular, has potential for high-level influence, e.g., on the Planning Commission, but can only meet once/twice a year, since it is a physical network.

### **3.5. Evidence of effectiveness**

Some networks and systems are thriving, while others are failing, due to a lack of resources and participation. For example, Solution Exchange for the Food and Nutrition Security Community is now dormant; the National Child Health Resource Centre (NCHRC) has had no resources to keep content up-to-date over the last six months, so their web stats have declined; and the Virtual Resource Centre has been dormant for a year with no content updated.

In terms of KM conveners' perspectives on the networks/systems effectiveness, a variety of views were expressed. Some felt that they were achieving more than envisioned; being recognized as important, taken seriously and influencing policy (e.g., National Neonatology Forum); throwing open interesting new ideas via knowledge platforms and were worth continuing.

Lot of interviews revealed perceptions of strengths, weaknesses, and influence rather than overall evaluative picture. Similarly, without fully analyzing how policy and practice decisions are made, and what influences decisionmakers, it is difficult to make any assumptions about the current effectiveness of these networks/systems in affecting change.

### **3.6. Strengths and weaknesses**

Key perceived strengths identified were ability and potential to influence, offering platforms to discuss and debate, and providing access to relevant knowledge (programmatic, operational). Key perceived weaknesses identified were a lack of resources, lack of willingness of stakeholders to share knowledge, and poor balance between individual and organizational priorities.

### **3.7. Challenges**

Various challenges were identified, including:

- It can take much time and effort to get members to share, learn, and discuss together—activity in discussions depend on topic of discussion and who posts them
- It is challenging to cater for a diversity of members—diverse points of views at times act as a barrier to consensus building
- Resources for this type of work are low and unrecognized—often this work not valued enough to be sustainable
- Knowledge repositories face challenges in communicating evidence for their audiences that is both engaging and relevant
- Turning decentralization ambitions and extending the reach of information is a challenge—lots of systems/network have future ambitions but lack the resources to develop areas such as translation, decentralization, to reach out to districts, and conduct face-to-face meetings.
- There are limited feedback mechanisms in place to monitor accessibility and use. Networks and systems need to track effectiveness, through better design and understanding of the sector.
- The efforts of knowledge mobilization are yet to be recognized and resource constraints are leading to many being dormant.

### **3.8. Enablers in mobilizing knowledge**

Face-to-face events were felt to help in engaging and energizing members. For example, members participated enthusiastically in the sanitary napkin discussion (MCH Solution Exchange), but a lack of resources to implement these face-to-face meetings means that many of these engagements have stopped.

KM Conveners felt communities of practice of knowledge sharing was the most cost-effective consultative process, that a collaborative process of networking helps in convergence of issues and a systematic way of knowledge mobilization helps stakeholders keep abreast of developments and learnings. They also felt that reinvention could be greatly avoided with leveraging on multiple capacities.

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The report is the outcome of inception phase of the POSHAN project. The report has been compiled from the information available on the World Wide Web and views of selected knowledge network/systems conveners. The authors wish to acknowledge the input of many participants who provided their time and inputs in compiling this report.

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