

# └ Consultation Summary – India

Consultation for the DFID research strategy 2008-2013

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## **Acknowledgements**

This summary reports reflects a work in progress. It was developed based on objectives and principles as articulated in the approach to the in country consultations presented to the Central Research Department of the Department for International Development.

Close to 150 stakeholders from the Government of India, Universities, Research Institutes, Non Governmental Organizations and the Private sector have dedicated time to contribute to the consultation.

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## **Abbreviations**

DFID	Department for International Development
CRD	Central Research Department
MDG	Millennium Development Goal
PPP	Public Private Partnership

## 1 Context and objectives of the consultation

The Department for International Development (DFID) is currently defining a new research strategy for 2008-2013. DFID's budget for research will double from £110 million in 2005/06 to £220 million in 2010. The new strategy is an opportunity for DFID to refocus on the most pressing research challenges, work in innovative ways and make new research partnerships. In order to guide this strategy the Department aims to consult internal and external stakeholders, i.e. users and producers of research, to determine the needs and priorities for research as well as to identify ways to improve priority setting, capacity building and dissemination.

The consultation process is taking place in three ways:

- i) through a series of in country consultations in Bangladesh, India, Uganda, Nigeria and Ethiopia, setting an agenda for later consultations in South Africa and China;
- ii) through discussions with key research stakeholders in the UK and with international funders;
- iii) using an electronic questionnaire to get a wide range of views from people in the UK and internationally interested in research for development in developing countries.

The Department asked two external parties to organise the in country consultations for the following countries: Uganda, Nigeria, Ethiopia, Bangladesh and India. The purpose of these consultations was to:

- bring accurate and unbiased views – both on possible research topics and on the process of funding, conducting and using research;
- incorporate the views of both producers and users of research;
- create an opportunity to stimulate discussion and to strengthen the partnership with stakeholders;
- collect and present actionable insights from the stakeholder consultations.

The output of each of the in country consultations is a summary report outlining the needs and ideas for research and the ideas for improvement of the research process. Each country report has been shared with the participants for feedback and with the respective DFID country office for comments.

## 2 Country context - India

India is the world's largest democracy and second most populous country. Since its independence in 1947, the government has been strictly in control of private sector participation, foreign trade and investments. In the early 90's Dr. Manmohan Singh (currently, Prime Minister of India) launched India's free market reforms under pressure from declining foreign currency reserves. These reforms brought India from near bankruptcy to becoming a rapidly growing economy. Some of the key facts for the country include:

- Population: 1.1 billion, with 300 million under \$1 a day
- Annual population growth rate: 1.4 %
- No. of people living below \$1 a day: 31.0%
- Gross National Income per capita: US\$ 630, Gross Domestic Product per capita: US\$ 3,100 (2004)
- Life expectancy at birth: 63.6 years
- Infant mortality rate: 65/1000 live births
- Under-five mortality rate: 90/1000 live births
- Maternal mortality rate: 407/100,000
- 47% of children under three are malnourished.
- Human development index rank: 126 out of 177 countries
- Gender equality: 83% of children attend primary school; 91% boys and 76% girls. The ratio of girls to boys in primary and secondary education has risen from 70% in 1990 to 79% in 2000.

India is making good progress on the Millennium Development Goals (MDGs). Good progress is being made on water and primary education targets. Although there is progress on income poverty, even meeting the target would still leave over 250 million poor in 2015. Only 40% of young people have access to post-elementary schooling. Girls' enrolments are growing faster than boys' but a significant gender gap remains. The percentage of children under 3 who are underweight has fallen but remains very high: 47% is the all-India average, ranging from 21% in the best states to 56% in worst.

Some of the major challenges India is facing in development can be summarised as follows:

- Current economic growth is increasing the gap between the social groups and states. The Gini coefficient is increasing;
- More than 90% of its workforce is employed in the informal sector, which, though vibrant, does not provide social security;
- Discrimination and social exclusion are faced by the majority of lower caste and tribal people, who are among the poorest 20% of the population;
- Gender inequality remains a pervasive form of social exclusion;
- Climate change will have significant impact on livelihoods in rural and tribal areas;
- Increased air pollution of surface and groundwater;
- Increased urbanization;
- Shortage of natural resources, notably fresh water.

The central planning commission of India recently launched the 11<sup>th</sup> plan, a five year plan for the economic development of India (2007-2012) to combat these challenges. The targets that can be derived from the plan can be segmented into six categories:

- (1) Income & Poverty, i.e. increase agricultural GDP growth rate to 4% per year to ensure a broader spread of benefits;
- (2) Education, i.e. reduce dropout rates of children from elementary school from 52.2% in 2003-04 to 20% by 2011-12;
- (3) Health, reduce infant mortality rate (IMR) to 28 and maternal mortality ratio (MMR) to 1 per 1000 live births;
- (4) Women and Children, i.e. ensure that at least 33 percent of the direct and indirect beneficiaries of all government schemes are women and girl children;
- (5) Infrastructure, i.e. ensure electricity connection to all villages and BPL households by 2009 and round-the-clock power by the end of the Plan;
- (6) Environment, increase forest and tree cover by 5 percentage points.

The larger bilateral and multilateral donors are present in the country, a number of the smaller donors have ceased their activities in recent years as the Government of India preferred to manage the time it is spending with donors. The role of DFID in India is small as compared with the total budget of the government. DFID is estimated to provide 290 Million GBP in funding in 2008/2009 on a budget of 805 Billion (2005) compared to 114 Million GBP on a budget of 62 Billion (2006) in Bangladesh

India has an enormous capacity to conduct science and policy research. Two of the ten largest universities based on enrolment are in India with 1.4 million (Indira Gandhi National Open University) and 450.000 students (Dr. Babasaheb Ambedkar Open University). The percentage of GDP that India is spending on research and development (currently 0.8%) is rising and high compared to an average of half this for developing countries.

### **3 Methodology of the consultation**

The purpose of the consultation programme is to get views on research needs and ideas as well as identify improvements of the research process (priority setting, building capacity and dissemination) from both those that do research, and those who access and use research knowledge to inform policy and practice.

#### **3.1 Consultation programme**

The approach for the country consultation programmes can be divided into four phases: (1) Stakeholder Interviews, (2) Topic specific workshops, (3) Cross Sectoral Workshop and (4) Senior Stakeholder workshop.

The topics for the topic specific workshops follow the DFID Central Research Department's four research priorities for the 2008-2013 strategy: (1) Sustainable agriculture, (2) Health and Killer diseases, (3) Climate change and (4) Governance & Social Research.

##### ***1 Stakeholder interviews***

The stakeholder interviews provided specific context for the in country consultation programme and helped prepare for and tailor the generic approach to the country consultations. Five key stakeholders were selected and interviewed for this purpose. The interview focused on four areas (1) Country overview of research user and provider community (2) Examples of good and bad experiences with the research process, (3) Needs and ideas for research and (4) Ideas for improvement of the research process.

##### ***2 Stakeholder questionnaire***

In addition to the stakeholder interviews we asked all the stakeholders that were invited to participate in the workshops to complete an online questionnaire. Through this questionnaire the stakeholders that could not make the workshops were given the opportunity to submit their needs and ideas for research. The questionnaire was completed by 133 stakeholders in India.

##### ***3 Topic specific workshops***

Topic specific workshops have been conducted in each of the four priority areas. Key stakeholders from industry, government, civil society, research institutes and universities at the national and state level participated in the workshops. The workshops took around four hours and were set up in a way that we had the full group, across national and state for the plenary discussions and the group split in two, one for national and one for state for the break out discussions.

The workshops had three specific sessions:



1. Introduction and strengths and weaknesses of how things work today - Introduce the objectives, schedule and the participants for the workshop and discuss the strengths and weakness of how things currently work. (1 hour)

We introduced the participants to the objectives of the workshop and the agenda for the day. After the introduction we asked the participants to write down two of their good and two of their bad experiences with using or conducting research. The facilitators then broke the group into two to have a circle discussion on their experiences while noting the strengths and weaknesses of how things work today.

2. Research needs and ideas - Determine the key barriers to achieving goals, understand the causes and determine how research can help to solve the problem. (1.5 hours)

The process to arrive at specific research needs and ideas, articulated as research questions was to start with picking goals in the specific topic area. These goals could be in line with the millennium development goals or it could be something specific to country. The decision on the top three goals to review was followed by a brainstorm to identify the barriers to achieving these goals. As a group, we conducted a root cause analysis on each of the barriers and determined if they are susceptible to research. Finally, we asked the participants to articulate specific research questions that would help address the barriers.

The second part of this session focused on idea generation. We used a number of provocative questions to get the participants to think outside the normal pattern to determine the future priorities for research.

3. Research process - Identify ways in which a funder like DFID can improve priority setting for research, build research capacity in developing countries, communicate research findings and support putting them into use. (1.5 hours)

For the purpose of this session we split up the research process into four areas (1) priority setting for research, (2) build research capacity in developing countries, (3) build capacity to put research into use and (4) dissemination of research. We brainstormed ideas for improvement as a full group on the first area and for the remaining areas we split the group into two, one group of research users and one group for research producers. In the session on dissemination of research we had the thoughts from the research users reviewed by the research producers and vice versa.

#### ***4 Cross Sectoral Workshop***

The cross sectoral workshop followed the topic specific workshops. The purpose of this workshop was to identify the research needs and ideas that are on the cutting edge of two or more topic areas.

The cross sectoral workshop had three specific sessions:

- Introduction – Introduction of the objectives, schedule and the participants. This was followed by a brief presentation of the preliminary results of the topic specific workshops conducted over the previous days. (0.5 hours)
- Research needs and ideas – We split the group along the four topic areas and conducted three break out sessions linking each topic area up with each of the others to identify research questions that fall between the priority areas (1.5 hours)
- Research process – Within the research process we specifically focused on the strengths and weaknesses of (1) partnerships to use and produce research and (2) interdisciplinary research and identify ideas for improvement (1 hour)

### ***5 Senior Stakeholder Workshop***

The purpose of the senior stakeholder workshop was to have a strategic discussion on the priority areas (and other topic areas not identified as priority areas by the central research department) and to determine how they contribute to growth and poverty reduction. The senior stakeholder workshop included senior representatives from Industry, Government (Central Planning, Economic Affairs, Prime Minister’s Office), Universities and research institutes.

The workshop followed the same structure as the topic specific workshops with three distinct sessions to capture strengths and weakness of how things work today, research needs and ideas and finally improvements for the research process.

The second session started of with a fixed goal rather than a prioritization of goals. The fixed goal was “Economic growth and poverty reduction” which was followed by a brainstorm on the major barriers to economic growth and poverty reduction. Finally, following the root cause analysis on the barriers we articulated specific research questions that could help address the barriers.

### **3.2 Consultation participants**

As briefly mentioned above, each of the topic specific consultation workshops required a balanced representation of Private Sector, Research Institutes (Scientific and policy), Government (Civil servants and policy makers), Civil Society (NGOs and people’s organisations) and Universities (Professors, scientific and policy). The participants for the cross sectoral workshop were picked from the participants of the topic specific workshops.

The senior stakeholder workshop required participation from a similar balanced group, only here the focus was on the people with a broader view on development. For the senior stakeholder workshop we included representatives from the following

- Government (Representatives from Central Planning, Prime Ministers Office and Ministries)
- Universities (University Professors, esp. scientific, economics, social sciences and policy experts from think-tanks on development, economics)
- Civil Society (Senior management of international and local poverty alleviation, economic development, education NGOs)

- Private sector (Senior management and senior members of major industry associations)

For each of the workshops a number of potential participants were identified, generally about two to three times as many as required to account for people not being able to participate for any reason. The target for confirmed participation was 120% to account for participants not showing up on the date.

Annex A includes a complete overview of all the participants from the India consultation programme.

### **3.3 Additional interviews**

We conducted an additional five interviews with representatives from the Government of India who had been unable to join the consultation. In order to ensure we capture their views we conducted telephone interviews concentrating on research needs and ideas.

## 4 Research priorities

The following chapter includes the results of the second session of the workshops which focused on research needs analysis and idea generation. The structure of the chapter follows the approach to the workshops, starting with paragraphs for the four main topics (following the priority areas), followed by a paragraph with the additional research needs and ideas that came from the cross cutting section and finally a paragraph on the topics that specifically related to the topic of inclusive growth.

Each of the paragraphs presents the research questions that were articulated by the participants. The research questions are categorized in two ways: (1) by sub topic, for instance in sustainable agriculture we recognize agricultural productivity and agro processing as subtopics, and (2) the type of research, i.e. Technology development and scientific research, Policy analysis and design and Operational research.

### 4.1 Sustainable agriculture

For the session on research needs analysis, the participants of the workshop on sustainable agriculture chose the following goals for India:

- Increasing overall agricultural productivity, sustainability and profitability through land productivity and value adding agro-processing industry;
- Developing agriculture as a source of stable income for the rural poor. This research priority involves agricultural livelihoods, market access and protection of livelihoods from natural disasters;
- Protecting natural resources (e.g. water and soil) and preserving biodiversity.

The research questions that emerged from the discussion have been divided into the following sub topics:

1. Land productivity and sustainability
2. Agricultural livelihoods
3. Protection of livelihoods from natural disasters
4. Protecting natural resources and preserving biodiversity in agricultural practices
5. Value-adding agro-processing industry
6. Market access

#### 1. Land productivity and sustainability

##### Technology development and scientific research

##### Farming inputs

- Develop varieties with a more efficient reaction to the use fertilizers and other inputs;
- Develop optimized feeds and species for farm fishing in the Indian waters;
- Develop varieties able to resist to extreme weather conditions and adverse climate (e.g. high-temperature resistant wheat, low-temperature resistant oil-seed and legumes)
- Develop molecular characterization of the germ plant for active production;
- Develop rice with genetic resistance to arsenic content in water;
- Develop rice with submergence/ drought/ salinity/ pest tolerant genes;
- How to cope with increasing salinity in coastal regions?
- How to introduce nitrogen fixers and genes in non-genetically modified crops?
- What is the optimum balance between genetically modified and traditional crops?
- What is the effect of greenhouse gas increase on crops?

### Farming practices

- How to incorporate indigenous knowledge into organic farming practices?
- Which traditional practices, beyond those commonly in use, are relevant to increase agricultural productivity? e.g. traditional catchments systems
- What are the additional opportunities of organic cultivation?
- How to increase the use of vermiculture?
- How to integrate tree systems/ forest to improve agricultural productivity?
- What low cost technologies suited to small farms could be developed to make best use of local resources and raw materials?
- What would be a fuel-efficient design for fishing boats? What would be alternatives to wooden boats?
- What are the best integrated farming systems for small holdings in specific micro-climatic/ agricultural practices?
- What are the most profitable integrated farming systems?
- How can outputs of integrated farming systems be used by other farming activities?
- How to avoid risks related to integrated farming systems (e.g. SARS)?

### Pesticides

- How effective are traditional pesticides and could their use be scaled up? What should be the standards regarding the use of traditional pesticides?
- Develop new herbicides
- How to integrate use of herbicides, bio-control agents and use of pesticides?

### Livestock

- Develop cost-effective diagnostic kits for animal health;
- Develop a new generation of cheaper livestock vaccines;
- What are options for new domestications?
- Which photo crops can help boost livestock productivity? e.g. for milk production

### Operational research

- Conduct a complete evaluation of herbicides and bio-control agents use and impact.
- Identify the bottlenecks created by production control (e.g. sugar, onions, tomatoes, potatoes). What are the benefits and costs of the existing policy? Who gains and loses from the existing policy?
- What could be learnt from Oman experience in bio-planned agriculture? Could it be implemented at a larger scale?
- Why are promising technologies not taken up by farmers?
- How to upscale bio-control agents and bio-fertilizers from laboratories to practice?

### Policy analysis and design

- How to provide incentives to encourage development and use of organic fertilizers?
- How to use subsidies to strengthen seed production programs?
- How to adapt irrigation policies and water management strategies to ensure that they are suited to each region?

## **2. Agricultural livelihoods**

### Technology development and scientific research

- What products and technologies should be developed specifically for the poorest farmers? e.g. irrigation technologies, small horsepower tractors
- What farm instruments and tools, using ergonomically suited and safer technologies, could reduce drudgery for women on farms?

- How to finance irrigation systems? What interim solutions are feasible for efficient irrigation if no financing is available?
- How to use technologies to bring wasteland into use? e.g. mycrozae
- How to bring village-specific knowledge to rural areas?
- How to develop and promote the production of medicinal herbs? How to turn them into a source of income for the poor? How to improve the availability and cost to the consumers?
- How does the agricultural economy interact with the rural non-farm and urban economies?
- What are the potential ways for engaging the landless year-round?
- How to reduce the use of middlemen in agricultural production?
- How to widen and scale farmers' clubs?
- How to set up collaborative pooling/ cooperative farming systems? Are these practices compatible with subsidies mechanisms?

#### Operational research

- Understand the actual impact and effect of technology on poor farmers (versus other farmers) with a special focus on lower caste groups and women ;
- How to make new technologies more accessible to the poor? To the most excluded groups?
- What mechanisms and incentives would encourage farmers to adopt exiting technologies and practices? e.g. using molasses to improve animal feed
- Which products or information should be used to build confidence among farmers? e.g. insurance, specific means of communication
- How to use contract farming and cooperatives to improve agricultural profitability?
- How could gender and lower caste research be brought into agricultural research?
- What could be learnt from successful models of village level financing institutions? How could they be scaled up?
- What could be learnt from the microfinance experience in Bangladesh?
- What could be learnt from land banking/ pooling for mass scale farming practices in Bangladesh?

#### Policy analysis and design

- How to encourage the development of the non-farming sector in rural areas? (women skills, artisan skills, service sector)
- What is the role of women self-help groups in contributing to the rural economy?
- What child rights are being violated in the development of agriculture as source of livelihood? How to address this issue?
- How to legalize leasing of land and assist the reduction of fragmented holdings?
- What is the role of urban agriculture? What is the responsibility of urban local bodies in developing agricultural livelihoods?
- How to encourage farmers' involvement in irrigation decisions and irrigation management (usually centralized)?
- What could be learnt from China regarding the contribution of agriculture to poverty reduction?

### **3. Protection of livelihoods from natural disasters**

#### Technology development and scientific research

- How to improve long-term weather forecast? (need for extra data gathering stations)
- What are the alternatives to remote sensing for predicting and measuring disasters strength and impact?
- What technology should be developed to improve early warning systems and predictive ability? e.g. rainfall level

- How to integrate weather forecast with crop simulations and deliver related advices to farmers?
- How to communicate weather and disaster predictions to farmers?
- What cropping patterns should be used to recover from disasters? (e.g. drought, flood, pests, late arrival of monsoon)
- How to cope with temperature changes and erratic rainfall in hill zones? Which crops should be used? Which planting times should be applied?

#### Operational research

- What are the best mechanisms of crop insurance in case of total or partial loss of production?
- What are the best mechanisms to distribute disaster relief to farmers – alternatives to crop insurance? (e.g. based on rainfall levels)

#### Policy analysis and design

- How to structure incentives and income insurance to ensure that they are effective in protecting livelihoods from natural disasters consequences?

### **4. Protecting natural resources and preserving biodiversity in agricultural practices**

#### Technology development and scientific research

- How to improve soil health to sustain agricultural activity?
- To which extent could conventional technologies be replaced by eco-friendly technologies? How could both technologies complement each others?
- How to lower water requirements for rice growing?
- How to adapt dripping and micro-irrigation systems for application in small holdings?
- What technology can be used and/or developed to help compost cow dung?
- How to increase biomass supply?
- What are the existing options for agricultural waste management? How could lessons be shared? e.g. use of rice straw
- How to incorporate the use of solar energy in farming practices? (apply existing technology and lower cost of energy)
- How can agriculture contribute to save water without loss of productivity? e.g. releasing water for other farmers or industry.
- How to control and manage the impact of industrial waste on agriculture, both on crops and soils?
- How to use industrial waste water for agricultural applications? Including the understanding of the bio-safety limit for water use and the effectiveness of existing standards.

#### Operational research

- What is the economic efficiency of irrigation?
- How to provide incentives to encourage the development and use of organic fertilizers?
- How to redistribute surplus water to water deficient areas?

#### Policy analysis and design

- How could policy contribute to improve soil health to sustain agricultural activity? (e.g. support eco-friendly technologies)
- How to control, manage and treat the impact of special economic zones on agriculture? e.g. reduction of land, concentration of pollution

### **5. Value-adding agro-processing industry**



#### Technology development and scientific research

- Which existing and new technologies could help improve the quality and profitability of agro-processing industry?
  - Equipment – e.g. canning equipment
  - Crops – e.g. best potatoes for chips
  - Inputs – e.g. pesticides with minimum residual effects
- Which cost-effective technologies could be developed for storage and processing of perishables at farm level? e.g. milk or vegetables processing at farm level.
- What are the most cost-effective technologies to get produce from production to processing sites?
- Which sectors of agro-processing are adding the most value? How much investment has been made into these sectors?
- How can agro-processing industry be developed to reach more small farmers?
- Which region- and crop-specific agro-businesses should be developed to supplement agricultural income, especially for women?
- Complete the definition of best agricultural practices to ensure production of export-quality produce (already existing for some products e.g. color genes for mangos);

#### Operational research

- How to increase awareness and prepare farmers to produce higher quality products for domestic and export markets?
- What could be learnt from mass production, post-production and logistics methods in other countries such as Denmark or New-Zealand?
- What could be learnt from micro-scale food quality standards in Europe?
- What could be learnt from Thailand experience in post-harvest technology (conservation)?

#### Policy analysis and design

- How to reduce costs throughout the agro-processing value chain and give higher prices to poor farmers?
- How private and public sectors can best cooperate to develop agricultural and agro-processing infrastructure?
- Define guidelines, codes of practice and legal framework for the agro-processing industry.
- What should be the quality standards for the agro-processing industry, based on market segmentation? e.g. grading, bulking and labelling required

### **6. Market access**

#### Technology development and scientific research

- How to develop access to information regarding market options and market prices at village level?
- What different market systems can operate at national, state and regional levels?
- What are the implications of the development of supermarkets retail format on agricultural livelihoods? What will be the impact on consumption patterns and hence on demand for agricultural products?
- How to ensure that produce quality is up to supermarkets' standards and that small producers are not squeezed out?
- How could small farmers benefit from the development of supermarket retail format? e.g. develop cluster farms to enter into contracts with retailers

#### Operational research



- Evaluate the impact of deregulation.
- Has deregulation helped Indian states to better assist small farmers?

#### Policy analysis and design

- How to simplify market access for small farmers?
- How to ensure that producer prices are not pushed down as a consequence of the development of the retail sector?
- How to deal with surplus in supply of agricultural products?

## **4.2 Health and killer diseases**

For the session on research needs analysis, the participants of the workshop on Health and killer diseases chose the following goals for India:

- Improving delivery and management of health services: infrastructure, staffing and skills; role of the private sector, health care financing.
- Improving maternal and child health.
- Reducing anaemia and nutrition related conditions.
- Combating emerging disease (e.g. life-style related, cancer, HIV/AIDS)
- Improving water & sanitation conditions
- Understanding of how economic improvements can lead to better health behaviour;

The research questions that emerged from the discussion have been divided into the following sub topics:

- Health systems: infrastructure, staffing and skills
- Improving maternal and child health
- Reducing anaemia and nutrition related conditions
- Combating emerging disease (e.g life-style related, cancer, HIV/AIDS)
- Role of the private sector
- Health care financing

### **1. Health systems: infrastructure, staffing and skills**

#### Technology development and scientific research

Technologies for front line health service delivery

- How can ICT contribute to improve service delivery in rural areas? e.g. radio, walkie-talkie for referrals.
- How to develop faster and tailored diagnostics technologies and capabilities? (to the needs of primary, secondary and tertiary health care)
- How to use IT to support physician decision making? What is the potential for computer based clinics?

Health Management information

- How can an effective Health Management Information Management system be developed, improved and used for evidence-based areas specific planning? e.g. regarding malaria and seasonal diseases, air borne diseases.
- How many people in urban areas don't have access to good healthcare services? What is the prevalence of quackery in urban areas?

Skills and capacity

- Evaluate health care human resources performance by district and compare to norms.

- What are the factors that would create an enabling environment to build local human resources capacity for healthcare?
- How can a local human resources capacity be built for healthcare by region?
- What are the current sources of dissatisfaction of healthcare workers and how to overcome them?
- How is training influencing healthcare practice?
- What profiles and skills are required for treating different diseases?
- What needs to be modified in medical training? e.g. syllabus (for pre- and in-service training), training methodology, time allocation for in-service training.
- How to improve training and coaching for middle managers of health care facilities? What leadership/ administrative/ management/ personality development training is needed for doctors?
- How to empower Panchayati Raj Institutions for bottom-up planning?
- How to identify good middle managers?
- How to train informal untrained providers as front-line health care workers?

#### Operational research

- How much do people know about healthcare standards? How much do they care and are willing to fight for healthcare standards?
- Understand attitude and behaviours of practitioners regarding healthcare standards and their dissemination of them. e.g. NABH standards.
- Are current healthcare standards practical in all contexts?
- What are the factors to be used to keep healthcare workers and doctors in rural areas? e.g. incentives (housing, schools), promotions, opportunities.
- Identify and evaluate successes and failures in past and current policies and plans regarding healthcare systems. e.g. mobile health units.
- Conduct operations research on implementation of healthcare programs in different areas to identify implementation hurdles – e.g. availability, quality, accessibility, utilization, coverage and accountability of healthcare services. Define the standards to use to overcome these hurdles.
- What is the current number of chemotherapists/ radiotherapists in India and what are the future need by region?
- How to replicate good accountability and governance practices in healthcare delivery?
- Evaluating the gap to achieving the MDGs in India and comparing with other countries to derive what could be done in India;

#### Policy analysis and design

- Should the division of control between state and national levels be maintained for healthcare services?
- Evaluate how policies get translated (or not) from national to state level.
- Identify balance of services to be provided at different levels and subsequent needs of local institutions.
- Based on Panchayati Raj Institutions current performance in managing healthcare services, understand how to promote further ownership by PRI?
- What are the gaps in primary health care facilities and how to address them?
- How to ensure accountability of healthcare practitioners? e.g. on safe abortion, on education, or female feticides.
- How to make healthcare service providing a more attractive career?
- How can the government create professional development paths for healthcare workers?
- How to use schools to improve health education?
- What should be done beyond the implementation of healthcare standards? e.g. reports on violations.

## 2. Improving maternal and child health

### Operational research

- What is actual impact of existing training programs related to Mother and Child health?
- How many medical centres are actually able to handle deliveries? e.g. don't have doctors or qualified nurses
- What is the status and availability of integrated Mother and Child health services?
- Identify goals, targets and impediments for the implementation of existing policies;
- Document status (quantitative and qualitative) of maternal and child health drivers – e.g. lifecycle of women, education of women.
- Use existing data sources to understand what is the impact of current programs in raising awareness;
- How much of Mother and Child health issues are related to cultural issues? e.g. consanguine marriages
- How to encourage optimal birth spacing?
- Are existing training programs related to Mother and Child health available to doctors and nurses in the private sector?
- What could be learnt from Sri Lanka and Malaysia experience in achieving results towards MDGs and in particular towards maternal mortality?

### Policy analysis and design

- How to improve the existing Mother and Child health policies and programs?
- How could training programs related to Mother and Child health be improved?
- How to promote community level action on maternal health? How can Panchayati Raj Institutions be facilitated to “own” maternal and child health services in general?

## 3. Reducing anaemia and nutrition related conditions

### Technology development and scientific research

- What are the opportunities for enhancing the nutritional value of commonly consumed items, especially for children and women?
- Revisit the bio-availability of iron in Indian foods;
- What is the impact on health of new types of processed foods?
- What are supplementation needs and options for children in India?
- What are alternatives to Iron and Folic-Acid (IFA) supplements? e.g. foods fortification
- How to achieve 90% use of IFA supplementations?
- How to improve the health condition of the fluoride victims in India?
- Confirm the linkages between worm infestations and anaemia;
- What technologies and simple methods exist for screening of anaemia? e.g. rapid cost effective kits to be used in the field
- How to provide affordable, large scale de-worming programs on a periodic basis?
- What is the optimal timing between de-worming treatments?

### Operational research

- To which extent have technology improvements (e.g. in agriculture) contributed to health and nutrition improvements?
- Monitor and evaluate of current anaemia programs (e.g. how much diet counselling is taking place? What is the actual distribution and use of nutrition tablets?)
- What are the performance issues in the implementation of anaemia programs?
- What are the linkages between prevalence of anaemia and gaps in healthcare delivery services?
- How to get iron supplementation to children who are out of school?

- What could be learnt from Sri Lanka and Malaysia in reducing nutrition related conditions and achieving results towards MDGs?
- What are the underlying factors behind nutrition patterns? (e.g. culture, religion, cost of foods)
- How to influence food fads and eating patterns?
- How to empower women in making decisions for their own diets?
- How to promote use of footwear to prevent worm infections and reduce causes of bleeding?
- What is the actual use and acceptance of Iron and Folic-Acid (IFA) supplementations?
- How to improve acceptance and consumption of Iron and Folic-Acid (IFA) by women?
- Are there ways to use focus groups more effectively in health research? e.g. with women to discuss use of iron supplements

#### Policy analysis and design

- How can school programs contribute to reduce anaemia and mal-nutrition?
- How to encourage and increase consumption of iodized salt?

### **4. Combating emerging disease (e.g life-style related, cancer, HIV/AIDS)**

#### Technology development and scientific research

- What simple technologies and tools for use in the field could be developed to diagnose diabetes?
- What is the full extent of impact of chemical pesticides in causing cancer?
- Conduct multi-centric, large scale study to evaluate the prevalence of diabetes (type 2 especially)

#### Operational research

- What could be learnt from the management of multi-diseases infected patients in other countries?
- What could be learnt from the implementation of polio programs among Muslim populations in Bangladesh and Saudi Arabia?
- What could be learnt from western countries regarding lifestyle related diseases? How are they managed? How could they have been avoided in the first place?

#### Policy analysis and design

- How to address social discrimination and stigma against AIDS and cancer patients?

### **5. Role of the private sector**

#### Technology development and scientific research

- How to develop alternative systems of medicines and extract drugs from native plants?
- What should be the priority topics for Public-Private Partnerships? Which components should private sector and government work on?
- How could Public-Private Partnerships contribute to the improvement of health care services? to the improvement of health insurance? to the improvement of diagnostic facilities? to the improvement of management and disposal of waste? to the improvement of laboratory services?
- How to close the gap between public and private health care sector given different financial models and enable Public-Private Partnerships programs?
- Is the current healthcare supply chain appropriate for the healthcare system?

#### Policy analysis and design

- How to encourage new molecules testing in India/ by Indian companies? (instead of outsourcing tests to western companies after identification of molecules)
- How to reduce the price of drugs in India?
- How to determine optimal control prices for essential drugs?
- What is the impact of pricing on use of combination?

## 6. Health care financing

### Technology development and scientific research

- How much funding is required for sustainable health care? (state by state, in rural and urban areas, for primary, secondary and tertiary healthcare) How does it compare to what is spent today?
- How can healthcare financing distribution be changed to be fairer?
- Develop healthcare demand forecasting and actuarial models.
- How could micro-insurance schemes be applied and rolled out?

### Operational research

- What are the best financing options for healthcare systems?
- What are the cost efficiencies of various private healthcare services? (comparing user fees, insurance level and objectives)
- How efficiently are current resources being used? What are the base data?
- What is the fit between resources and need? Is money wasted?
- What are the reasons for differences in output/input ratios?
- How to bring Third parties administrators to rural areas?

## 4.3 Climate change

For the session on research needs analysis, the participants of the workshop on Climate Change chose the following goals for India:

- Adapting to climate change and limiting the effects on the poor: understand the effects, limit and manage the effects of climate change
- Improving pollution control and waste management
- Water and sanitation, improving provision of safe drinking water and basic amenities
- Increasing use of renewable energy

Other goals that were identified included mitigating risks from natural disasters, controlling the effects of construction and mining activity and enabling growth without adding to greenhouse gas emissions.

The research questions that emerged from the discussion have been divided into the following sub topics:

- Understanding the effects of climate change on the poor
- Limiting and managing the effects of climate change
- Improving pollution control and waste management
- Water and sanitation, improving provision of safe drinking water and basic amenities
- Increasing use of alternative energies and new materials

### 1. Understanding the effects of climate change on the poor

#### Technology development and scientific research

- What are the actual variations of climate taking place in India?
- Understand rainfall change patterns per geographies at national and local levels;
- Understand microclimatic changes and their impact in hills, plains and coastal regions with a focus on most vulnerable aspects (water quality and diseases);
- Understand the relationship between changes in climate and disasters or emergence of diseases and epidemics;
- Understand the effects of sea level rise on coastal areas; e.g. impact on farmers and wildlife;
- Understand the effects of acid rain on agricultural production quality and returns; e.g. for fisheries or livestock related livelihoods.

#### Operational research

- How could national scenarios of climate change effects be downscaled to build regional or local scenarios?

#### Policy analysis and design

- What will be the full impact of climate change on agriculture and traditional industries?
- Understand the effects of climate change on livelihoods, living habits, housing or life expectancy of the most vulnerable groups;
- Identify the groups that will be the most affected by climate change;

## **2. Limiting and managing the effects of climate change**

#### Technology development and scientific research

- Which technologies could limit the effects of climate change on the poor and bring people out of poverty on the long term?
- What infrastructures (e.g. shelter) are best suited and can best withstand the effects of climate change? e.g. effects of sea level rise coastal zones, effect of typhoons.
- Identify or develop plant species which can tolerate higher temperatures, flooding, droughts, or salinity;
- How to adapt available environment related technologies to the specific situation of India? e.g. geographies, cultural groups.
- What are the effects of implementation of new technologies on other elements of the ecosystem?
- How to redistribute surplus water to water deficient areas?
- How to puncture hydrological barriers in water logged areas?
- What options exist or should be developed for disaster insurance?

#### Operational research

- What industries could be taken up in tribal and hill areas, as alternate to traditional industries which are disappearing under the effect of climate change?
- How to encourage and manage the introduction and transition to the use of new technologies?
- What examples exist on commercialisation of environmental assets? e.g. beneficiary model in Kani tribal area of Kerala. How could these models be scaled up?

#### Policy analysis and design

- How should livelihoods be diversified to minimize magnitude of climate change risk?
- What is the economic impact and associated risk of taking action to manage the effects of climate change now vs not taking action?
- How to best prepare for uncertainties related to the effects of climate change?
- What are the potential contingency plans? Which level of climate variations should they be based on?

- How to help the poor and most vulnerable groups to adapt to climate change? Which specific strategies should be adopted for each group and area?
- How to prevent migrations as a result of climate change? How to best organize migrants resettlement?
- How to subsidize environmental protection? How can environmental safety be part of national policy?
- How to curtail emission of greenhouse gas while not hampering growth?
- What is the need for a convention on Biological diversity?
- What could be learnt from Israel and the USA regarding the management of scarce water resources?
- What could be learnt from China regarding wind and erosion control?

### **3. Improving pollution control and waste management**

#### Technology development and scientific research

##### Pollution and waste reduction

- What are most cost effective methodologies to minimize wastes (all types)? What are the technical know how required to implementing these methodologies and technologies?
- Evaluate the effectiveness of vegetation/ forestation vs air quality control in reducing air pollution;
- Develop low water need crops (e.g. millet) to help reduce need for waste water management;
- What is the impact of transporting water and waste in parallel pipelines?
- Identify contaminated areas and qualify the impacts of water pollution on specific sub-sectors of the economy;
- What is the full impact of water pollution in coastal areas, including livelihoods and social aspects?

##### Waste treatment and disposal

- What is the most effective waste management approach for each type of waste (e.g. biological, chemical)? What could be the role of IT in waste management?
- What are the fastest and most labour-saving ways to treat waste?
- What is the role of IP in waste treatment and management related technologies?
- What is the quantity and quality of waste available for recycling and power generation potential?
- How to ensure safe disposal of industrial waste? e.g. chemical, pulp, riverine
- How can existing cost effective waste water treatment technologies be adapted to specific local situations (rural and urban)? Which of the available technologies are the most appropriate for small scale implementation?
- What new technologies exist for specific rural situations (where waste is directly afflued to surface water - septic tank-soakpit systems)?
- Develop water management systems and strategies tailored to users. e.g. industry, small farmers, large farmers.
- What are the available waste water treatment technologies types of needs and sources of pollution?

##### Recycling

- How to make the best use of all types of waste through recycling? How can different waste products be recycled in new ways?
- How to use industrial or domestic wastes in biomass production?
- What are the existing options for segregation in use of waste?



- How to increase the quality of waste water to increase the opportunity and reduce the cost of reutilization of treated waste water?
- Which sources of livelihoods could be created from waste management and recycling activities?
- What are the business opportunities to be developed on recycling and waste management activities?

#### Operational research

- Monitor the effectiveness of community vegetation and waste management programs, especially in urban areas;
- Monitor the effectiveness of current policies targeting pollution control and reduction;
- Why is only 50% of sewage treated? Is existing treatment capacity the only reason? What would be the cost of treating the remaining 50%?
- What could be learnt from the experience of water recycling and agricultural practices in the Netherlands to limit adverse effects on environment?
- What could be learnt from the experience of recycling programs in the UK?
- What could be learnt from Japan regarding the use of solid waste recycling in building materials for housing?
- How to raise awareness of the importance of waste management among the public?
- What are the most effective interventions to change behaviours towards pollution control (for specific areas and types of pollution)?

#### Policy analysis and design

- What are the options for providing incentives to reduce pollution?
- What are the possibilities for using income dependent taxation of pollution (taxation based on volume and type of pollution)?
- Review case studies where pollution tax has been implemented and evaluate the effect on pollution reduction as well as adverse effects (I pay so I pollute);
- How to increase the effectiveness of the Central Pollution Control Board?
- What should be the role of domestic vs foreign waste management practices?
- How to ensure that fool proof checks and controls are in place? develop electronic monitoring technology?

### **4. Water and sanitation, improving provision of safe drinking water and basic amenities**

#### Technology development and scientific research

- What is the impact on health of using contaminated waste water and excessive use of pesticides (e.g. close to urban areas)?
- What are the sources of water contamination of water by geographical area?
- How to prevent contamination of water? e.g. leakage of sewage into water supply, untreated water in the system, lack of network, pollution of open drainage;
- How to reduce leakage and transmission loss in the water distribution network? e.g. due to broken pipes, thefts;

#### Policy analysis and design

- How to improve the availability and quality of drinking water in rural areas?

### **5. Increasing use of alternative energies and new materials**

#### Technology development and scientific research



#### Small scale technologies

- Develop local and small applications and uses of bio-fuels (vs. global or international approaches)?
- What alternate sources of light could be used to support essential service in rural areas? e.g. solar lamps for health services.
- How to optimize small scale technologies for bio-fuel generation and use of by-products?

#### Sources of alternative fuels

- Which alternative species of crops, specific to India, could be used for alternative fuels? Which quantities are needed? Where could they be grown? What would be the impact on population and food production?
- Identify animal by-products which are the most effective in biogas production;
- What technologies could be used to replace the use of conventional fuels with new fuels in existing plants? e.g. technologies enabling to replace naphta with natural gas in fertilizers plants.
- Identify the best alternative to current sources of energy, both acceptable and realistically feasible;
- How to develop contract farming in wastelands to produce bio-fuel crops?
- Identify approaches to economically efficient use of crops by-products both for large and small scale implementation – e.g. approach to more efficient use of sugarcane by-products in power generation.

#### Efficient energy generation

- How to develop integrated energy technologies in electricity generation, heating systems? e.g. solar and thermal sources, biogas and thermal sources.
- How to improve micro-power technologies?
- What are the effects of hydropower on the ecosystem?
- How can waste be used to generate energy?
- How to apply biotechnologies to reduce energy consumption? e.g. use of bio-fertilizers.

#### Operational research

- Understand the level of acceptability of alternative fuels for users (e.g. car manufacturers, end-users) – What are the acceptable limits of blending of fuel? of impact on emission level? of modifications to be added to the cars?
- How to increase the adoption of natural energy sources? e.g. solar energy.
- What could be learnt from Germany and the Netherlands regarding alternative energies?
- What could be learnt from Europe regarding the use of insulation materials and eco-housing technologies?

#### Policy analysis and design

- Explore energy options and policy for India given the potential effects of climate change;
- How to make energy available to areas beyond grid as quickly as possible?
- How to improve mobility without increasing pollution?

## 4.4 Governance & Social Research

For the session on research needs analysis, the participants of the workshop on Governance & Social research chose the following goals for India:

- Improving the effectiveness, accountability and transparency of key public institutions;
- Improving the effective engagement of citizens in decision making, creating a culture of inclusion and equality within governance institutions;
- Improving equality of marginalized groups (including women, children, tribal peoples, migrants, informal workers, refugees, HIV infected people, low castes, religious minorities, widows and single women, and the poorest populations);
- Promoting inclusive growth;

The research questions that emerged from the discussion have been divided into the following sub topics:

- Improving effectiveness, accountability and transparency of key public institutions
- Increasing the effective engagement of citizens in decision making
- Improving equality of marginalized groups
- Promoting inclusive growth

They also mentioned raising awareness of rights, programs and entitlements, extending outreach and building capacity to use ICT, as well as the reduction and control of corruption and the promotion of relevant PPPs as priority research topics.

### 1. Improving effectiveness, accountability and transparency of key public institutions

#### Technology development and scientific research

- What is the relationship between local, national and global governance?
- What is the interaction between social structure and political institutions?
- Who really controls political institutions in India?
- What are the appropriate mechanisms for coordination among judicial, executive and legislative powers?
- What mechanisms exist for enforcement of regulations? e.g. on environmental issues.
- What is the role and impact of the media, individual politicians, etc. in advocating and monitoring accountability and transparency?
- How will globalization trends and evolving ICT impact the definition of transparency?
- What is the impact of globalization on political institutions, e.g. in terms of culture, sovereignty or economic impact?
- What global institutions are emerging and what is the impact on policy making, agenda setting and vested interest?
- How is the global financial system evolving in order to prepare for the future? How to replace dying institutions?

#### Operational research

- Have political institutions achieved their objectives?
- Has public participation in institutions improved as a result of good governance? Have institutions performance in delivering services improved as a result of good governance?
- What is the effectiveness of reformed political institutions? – need to document and disseminate results (Judiciary, Parliament, Cabinet, Planning commission, Regulators)

- Have institutional reforms contributed to the improvement of the provision of basic services? Need to measure the impact of interventions on service level and overall quality of life.
- What are public services are not used (education, health) and why? Where are there shortcomings in service delivery?
- How to use findings on corruption? (by Transparency International and other groups)
- How does large scale/everyday/insidious violence impact on governance and how do institutions deal with it (law and order)?
- What experiments are taking place in the field of good governance?

#### Policy analysis and design

- How to ensure that land holding records are effectively disseminated?

## **2. Increasing the effective engagement of citizens in decision making**

#### Technology development and scientific research

- What is the role of globalization in empowering/disempowering local populations?
- Does economic empowerment contribute to engaging citizens in decision making? How?
- What could be the role of Public-private partnerships? Where have PPPs been successful in engaging citizens in decision making? How to replicate best practices?
- How to engage effectively civil society to ensure accountability and transparency – especially for health and education services – in planning, budgeting, implementing and monitoring at micro and macro levels?
- How could citizens be involved in assessing the impact of regulatory decisions on population's life? e.g. impact of electricity tariff settings, telecom related policies.

#### Operational research

##### RTI Act

- How effective has the RTI Act (Right to Information Act) been and how to increase its effectiveness?
- Is there any potential additional scope for the RTI Act? How can RTI Act be used to help enhance citizens' participation?
- What are citizens' perspectives on governance? (some research exists but needs to be completed with perspectives from multiple states and regions as well as localized studies) e.g. how do citizens feel about delivery of services (health and education for example)? What are citizens' attitudes towards regulation and its enforcement, towards corruption?

##### Equality

- How does the limited mobility of women impact their participation in decision making? What other factors influence their participation? e.g. responsibility, division of labour, children.
- To what extent are vested interests in local politics blocking equality in decision making?

##### Community based organizations

- How to replicate success stories in engaging citizens in decision making?
- What are the reasons for successful Panchayati Institutions experiences in West-Bengal not being replicated elsewhere?
- What factors determine the success of a community based organization? How to replicate successful stories?

- To what extent has the gender equality been addressed in successful community based organizations?

#### Civil society groups

- Which civil society groups are not being engaged by the government and why is this occurring?
- To what extent are civil society organizations dealing with conflicting incentives? What is the extent of the issue?

#### Other countries experiences

- What can be learnt from other countries experiences and programs? e.g.
  - Kibbutz model in Israel;
  - Civil society strengthening program, and community involvement in TB control in Bangladesh;
  - Community involvement in forest management programs in Nepal;
  - Management of national irrigation agencies by farmers in cooperation with government in the Philippines;
  - Farmers producers cooperatives in Sri-Lanka;

#### Policy analysis and design

- How can civil society be engaged in the process of economic policy reforms?
- In what ways can the involvement of civil society be strengthened in the areas of governance of regulation?
- How to make industry accountable to the society? How to enhance people's participation in making industry accountable to the society? (especially when industry activity has a strong impact on people's environment, e.g. mining or steel industries)

### **3. Improving equality of marginalized groups**

#### Technology development and scientific research

- Improve understanding of old and new forms of discrimination and social exclusions – e.g. caste, gender.
- What are the patterns of emerging economic, social and socio-economic inequalities?
- What are the patterns of inequality in diverse geographic locations and tribal groups?
- Why are marginalized groups not having access to the same resources as other groups? To what extent are they left behind? What are the barriers?
- What has been the impact of existing researches and recommendations already conducted on these barriers?
- What is the dynamic around denials of access rights? How can delivery systems be improved to streamline processes and limit denials of rights?
- How to operationalize findings on promotion of equality between boys and girls?
- How to include 'invisible populations' in research work? e.g. migrants

#### Operational research

##### Reservation system/ affirmative action

- How effective has the reservation of seats system been in reducing inequality? What problems has it created? (some research exists but need to be completed)
- How do government institutions perceive women elected through the reservation system? Are there any cases of intimidation?
- What are the side effects of affirmative actions supporting representation? To what extent are these side effects happening?

## Inequality

- Which processes and policies have led to greater inequality? e.g. reservations system, globalization, special economic zones, industrialization, forest act... especially for tribal peoples, landless and informal workers.
- To what extent have schools program strengthened inequalities?
- How much has the government done so far to address the needs of the disabled? Research needed by type of disability.
- How have tribal people been influenced by non-tribal peoples – through urbanization or media influence?
- Why do people from marginalized groups who have had successful exposure to development maintain distance with their original groups or even exploit them?
- What are the success stories from other states/ countries increasing equality for HIV infected people – and other marginalized groups?

## Policy analysis and design

- How to empower the state governments to address the needs of tribal peoples in a constitutional manner?
- What are the successes of the government to date in mitigating discrimination against low caste people? Current access to social justice (development benefits, discrimination)
- How to reduce the vulnerability of informal workers from local authorities (e.g. police) – e.g. on sexual or political harassment, wages?

## **4.5 Cross cutting issues**

In bringing together expert stakeholders from each of the four sectors in a single, cross-cutting workshop, new and important research questions emerged which span two or more sectors. The questions listed below have not been captured under any single sector list above.

### **1. Research in Agriculture and Health**

#### **Impact of agricultural practices on health**

- Conduct a complete evaluation of herbicides, pesticides and inorganic fertilizers use and their impact on health;
- What is the impact of growth hormones and other chemicals used to improve the look and taste of agricultural produce on health? e.g. food poisoning, cancer, obesity, hypertension, cancer.
- What is the bio-availability of nutrients on crops from organic vs inorganic conditions? e.g. natural vs hybrid products, zinc and iron content in wheat under organic conditions.
- How to minimize occupational health hazards for agricultural families? e.g. allergies, insecticides poisoning, worm infestations.
- What is the effect of indoor insecticide spraying on health? e.g. via fumes, dust and contamination of food.
- What are the probabilities of toxicity during post-harvest storage for both vegetables and non-perishable crops?
- Which varieties of crops are the most effective in extracting heavy metals from the soil?
- What are the hazards of vector borne diseases due to water stagnation in canal command areas?
- How to grow rice while minimizing water stagnation? What are the possibilities of dry rice cultivation?

- What are the effects of water logging on breeding of parasites and mosquitoes? What are the effects on the development of elephantitis, malaria, dengue, encephalitis?
- How to prevent open air defecation? What alternative options could be developed for rural areas?
- How to control and adopt alternative methods for carcasses disposal?

## **2. Research in Agriculture and the Environment**

### **Impact of agricultural practices on the environment**

- What are the implications of current agricultural practices for natural resources management? e.g. implications of rice and wheat rotation focus or use of inorganic fertilizers for soil quality, ground water table, ground water quality
- What are the effects of fertilizers, chemical, pesticides residues and composted waste on surface and ground water quality? What are the effects for different uses of water?
- What are the effects of deforestation on local ecological balances?
- How can agricultural practices be modified to minimize environmental damages?
- How to avoid or reduce excess irrigation?
- How to avoid or reduce the use of fertilizers and pesticides?
- How can agricultural practices be modified to increase food quality?

### **Impact of climate change on agricultural practices and productivity**

- How should farmers adapt their practices in reaction to climate changes? e.g. introduce rotation of crops;
- Which technologies could contribute to the adaptation of agricultural practices to changes in the environment?
- How to adapt to shortage of water? e.g. introduction of dual harvesting
- How to improve the efficient use of water? e.g. drip irrigation
- How to use saline and fresh water in conjunction?
- How to manage water salinity?
- How to adapt to soil degradation and manage soil quality?

## **3. Research in Agriculture and Governance**

### **Impact of subsidies and pricing policies on agricultural livelihoods**

- What has been the impact on farmers of subsidies of agricultural inputs and outputs ? What has been the impact on consumers? Who are the actual beneficiaries of subsidies?
- What are the best subsidy or pricing mechanisms for protecting farmers?
- How much of the subsidies go into improving agricultural productivity?
- What is the impact of tax related concessions on agricultural incomes?
- What is the delivery cost of the public distribution system? e.g. in the cases of sugar or rice
- How to best rationalize water pricing to make irrigation systems sustainable?
- Identify regions and crop specific agro-businesses which should be encouraged to supplement women incomes;

## **4. Research on the Environment and Governance**

### **Methods for controlling pollution – incentive structures and regulation**

- How effective have been current policies in providing incentives to reduce pollution?
- What are the options for providing incentives to reduce pollution?
- What are the options for using income dependent taxation of pollution (based on volume and/or type of pollution)?

- Review case studies where pollution tax has been implemented. What has been the actual impact on pollution reduction? Are there any adverse effects? e.g. I pay so I pollute
- What mechanisms exist to enforce regulations, specifically on environmental issues
- What are the most effective interventions to change behaviours in the space of pollution control? What are the most effective interventions for specific areas? What are the most effective interventions for different types of pollution?
- What are the main reasons for treating only 50% of sewage? existing capacity? cost benefit? What would be the cost of treating the remaining 50%?
- How to increase the effectiveness of the central pollution control board? How to overcome the issue of enforcement at the state level?

## **5. Research on Governance and Health**

### **Accountability and corruption in health services**

- How to clarify accountabilities between government agencies for health services to urban poor? e.g. Ministry of health vs. local authorities
- How much money is being utilized for intended purposes in health services? How much money is lost to corruption?
- Where are resources lost in the health system? What can be done about it?
- How can people use Right To Information Act to access information regarding inputs and outputs for health services and hold government institutions accountable?
- To what extent are government-free and subsidized medicines sold on the open market?

## **6. Research on Health and the Environment**

### **Impact of climate change on health**

- What are the quantifiable effects of air pollution on respiratory diseases? What are the effects by region?
- What alternative pest control methods could be developed for urban areas?

## **4.6 Education**

In addition to the four priority areas, the participants mentioned education most frequently as an area that is of specific importance for India. We have discussed Education as a separate topic in the senior stakeholder session. The following research questions were identified in this session:

### **Technology development and scientific research**

- How to increase investment in education?
- How should India prepare for the impact of universal primary education? e.g. extra demand for secondary schools places
- How manage expectations and provide employment after graduation?
- What happens to education attendance if access is provided? (do a test case of enrolment, retention, transition to higher education)
- What should be minimum standards for primary schools?
- What is the impact of private schools on the quality of government schools?

### **Operational research**

- How many schools are “barrier free” and accessible to marginalized groups? e.g. schools accessible to disabled people, schools providing female infrastructures.

- What has been the impact and the quality of the “education for all” program?
- What is the effectiveness of the primary/ secondary education systems overall?
- What is the level of international integration of higher education?
- Why do Bangladesh and Sri Lanka have such high levels of school attendance?
- What are Panchayati Raj Institutions doing to manage primary schools and what could/should they do?

### **Policy analysis and design**

- How to create an enabling environment to attract teachers to rural areas?
- What is the political linkage of primary school teachers? What is the impact on education?
- How to regulate private schools?
- How to overcome reasons for girls attending school? e.g. social, economic and cultural issues, by region



## 5 Potential Research Contributions to Inclusive Growth

Participants in each topic-specific workshop were able to articulate a clear connection between improvements to their particular sector and inclusive growth.

**Sustainable agriculture** was considered to be able to contribute to inclusive growth through the development and use of technologies that can be used on a small scale to improve productivity. Additionally, the participants indicated that there is a potential in reviewing the current market structure and procedures to develop more direct access for the smaller farmers.

Research was seen to be able to contribute significantly in improving agriculture in achieving inclusive growth. A few of the questions that participants indicated include:

- How is globalization likely to affect the bargaining power of those below the poverty line?
- How can agro-processing industry be developed to reach more small farmers?
- How to reduce costs throughout the agro-processing value chain and give higher prices to poor farmers?
- How to simplify market access for small farmers?
- What is the impact of shopping centres and other changes in the retail sector on informal economy and traditional livelihoods?

In the area of **Health and Killer diseases**, participants felt that economic and inclusive growth could be facilitated through growth in the domestic pharmaceutical, pharmaceuticals testing, and biotechnology industries; and through productivity gains resulting from a healthier work force.

Research was seen to be able to contribute in enabling health to contribute to achieving inclusive growth. A few of the questions that participants indicated include:

- How to develop alternative systems of medicines and extract drugs from native plants?
- How to encourage new molecules testing in India/ by Indian companies? (instead of outsourcing tests to western companies after identification of molecules)

In the area of **Climate change**, participants suggested that improved waste management and control of pollution, climate change adaptation, recycling and use of waste for power generation could contribute to more inclusive growth. Research was seen as a key element in developing mitigation and adaptation strategies that will help India prevent climate change of having an uncontrollable impact on the growth of the economy. A few of the questions that participants indicated include:

- Which technologies could limit the effects of climate change on the poor and bring people out of poverty on the long term?
- Identify or develop plant species which can tolerate higher temperatures, flooding, droughts, or salinity;
- What industries could be taken up in tribal and hill areas, as alternate to traditional industries which are disappearing under the effect of climate change?
- What is the quantity and quality of waste available for recycling and power generation potential?
- What are the business opportunities to be developed on recycling and waste management activities?

Improved **Governance** was also expected to contribute to inclusive growth, by controlling corruption and improving effectiveness of government institutions. With regard to Governance and growth, participants wished to see research used to address the following:

- What type of opportunities will be available in the future? – e.g. still computer science?

- How will global forces volatility influence job opportunities in India?
- How to create employment opportunities in the rural areas? What are the local skills and resources needed to do so?
- What are the best models for CSR – supply chains, employee treatment, by industry (e.g. construction), beyond philanthropy
- How do multinational corporations impact local and national politics?
- How has/ would economic empowerment lead to greater equality?

## 6 Research process

There are five areas within the research process that are highlighted in this chapter: (1) Priority setting and selection, (2) Capacity building to do research, (3) Capacity building to use research, (4) Partnerships in capacity building and (5) Dissemination to get research into use. Each of the areas has been a specific topic of discussion in the session on the research process in the consultation workshops. This chapter summarizes the ideas generated across all session to make the process more effective.

### 6.1 Priority-setting

This part of the process includes both assessing needs as well as picking up good ideas from research producers. The participants were asked how they currently contributed to the process and how they would ideally contribute to the process for the purpose of identifying best practices and specific improvements. The ideas for improvements can be organised along five themes:

***Conduct review of country status to define priorities*** – As a basis for the process of priority setting the participants mentioned that donors should conduct a review which at least includes the following:

- Review quantitative and qualitative indicators for the country;
- Review national census data to identify gaps (health, literacy, health) and determine whether is it understood why these gaps exist;
- Conduct meta-analysis of existing research.

***Ensure priorities link in with other initiatives*** – Review with other major donors, government and non-government are doing and determine where to complement and enrich the funding for research. The participants mentioned the following specifically:

- Review research strategies of major research institutions (government or non-government)
- Consider current plans and initiatives in India, such as the 11<sup>th</sup> five-year plan and determine how to complement or enrich

***Draft priorities based on preparation*** - Based on the preparation the donors should assemble a draft strategy to be discussed with the various groups of stakeholders in the country.

***Engage experts' panels / policy makers and other stakeholders*** – Use the draft strategy to engage experts at national, state and local level for feedback. The participants to the workshop mentioned the following ideas:

- Conduct workshops and consultations with all stakeholders;
- Engage with local stakeholders (e.g. users, local NGOs) to identify priorities;
- Use of peer review of proposals by subject matter experts.

**Provide guidelines for project selection** - The participants mentioned a number of ideas for “rules of thumb” that could improve the project selection process. The following ideas were mentioned specifically:

- Strike a balance between projects with short and long-term effects;
- Give priority to multi-disciplinary approaches;
- Give priority to projects/research with high stakeholder involvement;
- Have procedures in place to propose research outside of priority areas.

## 6.2 Capacity building for doing research

The second part of the research process reviewed with the workshop participants was capacity building for doing research. The participants were asked to identify the gaps in capacity to do research in the current situation followed by a brainstorm on ideas for bridging these gaps. The ideas for improvements can be organised along five themes:

**Conduct Human resources development** - The gaps in capacity to do research currently experienced are primarily around having, retaining and building up a skilled research community. Some of the ideas to overcome these gaps mentioned by the participants included the following:

- Develop soft skills more than technical skills – e.g. partnership management, evaluation, stakeholders consultation;
- Develop capacity in regulatory subjects;
- Build more research capacity (post-graduate level) and development/ refresher programs and training), exchange programs within India and with other universities;
- Develop training / study abroad programs, short and long term;
- Provide incentives for professors to conduct research;
- Provide international exposure through training and workshops for scientists, line department, users of reputable institutions;
- Develop writing skills.

**Provide research facilities and infrastructure** – A second challenge in building capacity to do research focused on the availability of the facilities and infrastructure that is required to do, primarily scientific research. The participants mentioned the following:

- Specific funding for building facilities and infrastructure to conduct research, i.e. laboratories with latest equipment
- Full scaling up of process and technologies (vs steps and big gaps in scaling up process)

**Provide access to information and knowledge** – The lack of access to and availability of information and knowledge came up several times in the workshops. The participants mentioned the following specifically:

- Clarity, create transparency in Intellectual Property rights management
- Provide access to previous research – specifically agricultural

**Provide funding** – Finally, the availability of funding to build capacity to do research was mentioned by the participants as a barrier. One specific suggestion was to include a fixed

part of research studies to building skills to conduct research, either through providing facilities, building skills or providing access to information.

### **6.3 Capacity building for using research**

The third part of the research process reviewed with the workshop participants was capacity building for using research. The participants were asked to identify the gaps in capacity to use research that they experienced in the current situation. This was followed by a brainstorm session to identify ideas for bridging these gaps. The ideas for improvements can be organised along three themes:

***Set the scene for building skills*** – A number of ideas emerged from the discussions with the participants that focused on setting the scene for building skills to use research. Setting the scene includes initiatives done in preparation to increase the uptake of research. The participants mentioned the following specifically:

- Make the implementation plan part of the research proposal and ensure funding for putting research into use
- Ensure needs-based research – users must be heard as part of the process of designing research
- Relaxing/removing other constraints on farmers preventing the use of research, e.g. lack of credit
- Conduct impact assessment – how can research contribute to skills building?

***Build skills to put research into use*** - The ideas of participants specific to building skills to put research into use focused on ensuring that users are involved in the process and coached in the implementation, that results are presented in a simple way and that research comes with practical guidelines on interpretation and implementation. Some examples of the comments made in the consultation include:

- Provide tools and methodologies specifically to put research into use;
- Provide training and use a train of trainers approach to build capacity to put research into use
- Provide skills through a combination of training, piloting/ showcasing of research outputs
- Provide training of policy makers depending on outcomes of the research

***Engage users in research process*** – One specific idea to improve capacity to put research into use that was frequently mentioned is to engage the users of research more in the process of conducting research. This helps improve understanding of research and ensures that the research conducted is practical and relevant. Some of the ideas mentioned included:

- Provide demonstrations to users, ensure that all necessary resources available for these demos
- Promote collaboration of researchers to present their work to policy makers – bring consultants to help disseminate and implement research – e.g. through resources centers
- Develop village level consultants to organize dissemination (e.g. putting on video conferences, posters, etc.)

- Conferences, workshops – one to one interactions between fellow researchers, researchers and policy makers – should involve multiple stakeholders and research users (at both national and regional level)
- Provide help line to put research into use

#### **6.4 Role of partnerships in capacity-building**

The role of partnerships in capacity building to do and to use research was discussed separately in the cross sectoral and senior stakeholder workshops. The participants were asked to share their experiences with partnerships, good or bad, and their ideas for improvement.

The participants agreed that the benefits of partnerships are ample. The benefits the most frequently mentioned included technology transfer, learning about good practices, capacity-building, sharing of global and regional experience, improved monitoring and quality control, increased social benefits to communities and improved work culture (more serious).

The ideas for improvement of partnerships, North-South and South-South included the following:

##### **North-South**

- More collaborative programs with foreign institutions, such as universities, donors and research institutions (for, e.g., environmental research, curriculum development)
- Public private partnerships for research and product development
- Ensure funding to sustain coalitions beyond one projects
- Application of research results
- Partnerships are need, especially for basic research and for academic exchange programs

##### **South-South**

- Focus should be on applied research and technologies
- India can help neighboring countries through collaboration across centers of excellence across region
- Support for development, licensing and dissemination of existing technologies - e.g. battery powered cars, treatment methods
- Exchange of technical expertise through workshops, programs – including social elements
- Use of Indian embassies abroad – building protocols and partnerships between local institutions and Indian institutions

#### **6.5 Dissemination of research to get it into use**

The workshop participants all recognize that there is a lot of research already out there and that too often research, once completed, fails to be put into use for a variety of reasons, sometimes simply because user don't know that the research is there. The ideas of the participants for improvement of research dissemination varied depending on the audience, the action to provoke and the message they had in mind.

**Disseminate to the research community** - To better share research results among themselves, researchers suggested that additional opportunities to publish findings in journals, following peer review, should be sought. The following ideas emerged from the discussions:

- Conferences, conference papers, and presentation at academic and research institutions
- Online publications through knowledge portals by traditional papers but also by webcasts
- Use of electronic networks and distribution lists and online communities

**Disseminate to policy makers** - Policy makers and bureaucrats require a specific dissemination approach. Participants recommended that this group be involved early on in the research process, to get buy-in before results are prepared and released. In targeting this audience, researchers should consider:

- Preparing policy briefs
- Specifying policy implications (tailored to non-scientists)
- Offering policy workshops
- Attending parliamentary meetings
- Publish results in news papers.

**Disseminate to end users and practitioners** - Research results that are directly aimed at practitioners and end users require a well thought through dissemination strategy. The participants mentioned that the message has to meet at least the following specifications:

- Message should be presented in local language
- Alternatively, content should be presented in graphic or visual form
- The message should be simple and concise
- The message should stay with the user, use of slogans or other association
- Ensure that there is a value for the user in the message

To improve the uptake of research, the participants mentioned a number of practices that they or others have used and that have worked well. These include the following:

- Direct communication (e.g. workshops) with community leaders (e.g. clergy, women's groups, etc.)
- Making people feel that the projects are their own – e.g. include the research data gathering in the health services – weigh child when coming to health centres, as part of nutrition research
- Engaging local NGOs to help disseminate results to end-users
- Used of professional networks (i.e. schools, community meetings (PRIS), religious organizations, local government, NGOs, professional bodies)
- Attendance at 'field days,' fairs or rallies
- Printed leaflets and posters
- Communication through practice networks or professional bodies (e.g. health care workers)
- Training manuals for practitioners
- Involving the private sector to help disseminate research as they sell products, including detailed labelling of benefits (according to research results) on consumer products (e.g. fertilizers to farmers).

**Disseminate to (and through) media** - Participants in every workshop mentioned the media as a channel for disseminating research results to end users, practitioners, policy makers and even fellow researchers that is not been leveraged fully. Beyond television and radio news and newspaper articles, participants suggested:

- Talk shows or even drama programs
- Use of folk media, such as theatre

- Electronic media, such as mobile phone networks, internet

To attract media interest, participants suggested press releases, kits and conferences on research results as well as field trips for the press.



## Annex A: Consultation Participants

### Sustainable agriculture (National)

Nr.	Name	Organisation
1	Dharmvir Singh Rana	Indian Agricultural Research Institute
2	Harshad.R.Joshi.	VRS Foods Ltd
3	Ian Wright (Dr)	ILRI
4	Lalit Ballani	Ballani " s Farm Shop and Chinnoni Chambal Organics
5	Manoj Khanna (Dr)	Indian Council of Agricultural Research
6	Olaf Erenstein (Dr )	CIMMYT
7	Pankaj Kumar Sharma	Mother Dairy , Delhi
8	Pramode Kant (Dr )	Institute of Global Warmin and ecological studies
9	Rajbir Yadav (Dr)	Indian Council of Agricultural Research
10	Raju Sharma	"Mawana Sugars LtdAmerican India Foundation"
11	S K Gupta (Dr)	Planning Commission , Yojana Bhawan , Parliament Str
12	Sudhir Kochhar (Dr)	Indian Council of Agricultural Research
13	T. P. Trivedi	Indian Council of Agricultural Research
14	Vijay Kumar	Indian Council of Agricultural Research

### Sustainable agriculture (State)

Nr.	Name	Organisation
1	Anil Kumar	Department of Agriculture, Jammu"
2	Anil kumar Verma	State Bank of India
3	Arun Johri	Field fresh fruits
4	Bharat Prasad (Dr.)	Rajendra Agriculture University
5	D Periyar Ramasamy	Tamilnadu Agricultural University
6	Gopi Chand Saini (Dr.)	HP Agriculture University
7	Jitender Rana	Indian Council of Agriculture Research
8	K. P. C. Rao	ICRISAT
9	L D Bist (Dr)	GBPUA&T
10	Manoj Prasad	century cement (birla group)
11	Pramod Sarode	Satpuda Vikas mandal,Pal Krishi Vidyan Kendra,Pal
12	Shiv Singh	State Water Resources Agency,Lucknow
13	Snehlata Sarode	Satpuda vikas mandal,palkrishi vigyan kendra
14	Subir kumar Bardhan roy	Rice Research Institute Government of West Bengal Chinsurah
15	Syed Abbas	UP land development corporation, MINOR IRRIGATION DEPARTMENT
16	Vimal Kishor	National Bank for Agriculture and Rural Development
17	Yeshpal Singh	GB Pant University of Agriculture and Technology, Pantnagar

## Health & Killer Diseases (National)

Nr.	Name	Organisation
1	A.K.GUPTA (Dr.)	Shubham Hospital
2	Akhilesh Bhargava	Government of Rajasthan
3	Anil Kumar (Dr)	CGHS Ministry of Health and Family Welfare
4	Ashwani Singh	Ministry of Health and Family Welfare, New Delhi
5	B K Singh (Dr)	Aairport Authority of India
6	Barun Kanjilal	Indian Institute of Health Management Research (IIHMR)
7	Essa Mohamed Rafique	UNAIDS
8	Geetha K Raman (Dr.)	Global Cancer Concern India
9	K Suresh (Dr.)	Freelance - Worked with Various agencies as a consultant
10	K. P. S. Nair	Global Cancer Concern India
11	Mala Srikanth (Dr)	World Health Organization
12	Manisha Chawla	Indian Institute of Health Management Research (IIHMR), Jaipur
13	Mukesh Paul	Air force Hospital
14	N. C. Saxena	Infrastructure Professional Enterprise
15	N. Sajitha (Mrs.)	SAHARA
16	Om Singh	Institute of Health Management
17	R. K. Pal (Dr.)	Institute of Integrated Learning and Management, New Delhi
18	R.L. Mathur	Ministry of Health & FW - GOI
19	S. C. Mohapatra	Retired from Lady Harding Medical College
20	Sattar Bhatti	Christian Medical College Ludhiana

17	Yeshpal Singh	GB Pant University of Agriculture and Technology, Pantnagar
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## Health & Killer Diseases (State)

Nr.	Name	Organisation
1	Apoorvaa Pandit	Project Manager,Watershed Organisation Trust
2	Saumendra nath Bagchi	UNICEF India, CARE India, WHO, Government of India
3	Anitha Cecelia jebaraj	YRG Centre for AIDS Research and Education
4	Rajagopal Kuttappannair	Sut hospital &medical college Government of Kerala
5	Narsing Rao	SAHARA India
6	Priyamvada Todankar (Mrs.)	POPULATION SERVICES INTERNATIONAL
7	Umakant Dash	Indian Institute of Technology (ITT), Madras
8	Debashis Acharya	Indian Institute of Technology (ITT), Madras
9	H. S. Bhat	MANIPAL UNIVERSITY-KASTURBA MEDICAL COLLEGEUNITY HEALTH COMPLEX
10	Pranab Majumdar	Government of West Bengal
11	Kaushal Kumar	Health and Family Welfare Department
12	Venkataraman Sritharan	Icfaitech Hyderabad

13	Abhay Kudale	Centre of Health Research and Development, Pune.
14	Sheela Rangan (Dr.)	Centre of Health Research and Development, Pune.
15	Uma Nambiar	Fortis Hospital , NOIDA
16	K. M. Ojha (Dr.)	BHIND in MP
17	Mrs. Paul	SANGINE

### Climate change (National)

Nr.	Name	Organisation
1	A.N. Sarkar (Dr.)	University of Petroleum & Energy Studies
2	Anish Chatterjee	GTZ - German Technical Group
3	Ashok Madhukar	Central Ground Water Board
4	Bijendra Jain	Delhi Development Authority
5	G.M.Rughwani	National Thermal Power Corporation Ltd.
6	Govind Mishra	Hi Tech Institute of Engineering and Technology
7	Jagdish Punetha	World Wide Fund For Nature India
8	Krishna Pal (Dr )	RITES LTD
9	Kusum Jain	Deloitte India
10	Partha Neogi	Feed Back Ventures Pvt. Ltd.
11	Probal Dasgupta	Sumitomo Chemical India Pvt Ltd
12	Surender Syal	Catcanind carrier and technology Canada/ India
13	Vinayak (Mr.)	Water and Power Consultancy Services ( I ) Ltd . , Gurgaon

### Climate change (State)

Nr.	Name	Organisation
1	Anil Bhandari	Rajasthan Urban Infrastructure Development Project, Government of Rajasthan
2	Avadhanula Raghunath Rao	Federation Of Farmers Associations
3	Biren Dalal	Gujarat Water Supply Infrastructure
4	Dinesh Aggarwal	Deloitte Touche Tohmatsu India Private Limited
5	Genda Singh (Mr.)	Arid Forest Research Institute
6	Kamal Khandelwal	Sanitation water and community development
7	Madhu Sudan Doria	Community awareness programme project
8	Paul Moonjely	Welfare Services Ernakulam
9	Pradeep Mohapatra	Care India
10	Prakash p. Ambalkar	Central Institute of Agricultural Engineering
11	Raj Kumar Singh	Feedback Ventures
12	Sandhya Ahuja	JANANI
13	Soumitra Ghosh (Mr.)	International Institute for Population Sciences
14	Subodh Kumar Pandey	Water and Power Consultancy Services ( I ) Ltd . , Gurgaon
15	Yogesh Agrawal	Intra-instructor professional Enterprise , Delhi

### Governance & Social Research (National)

Nr.	Name	Organisation
1	Aadesh Chopra	Style Solutions Pvt Ltd
2	Avni Malhotra	Swiss Agency of Development and Cooperation Plan International, Oxfam, Aga Khan
3	K. T. Gurmukhi	Consultant
4	Parikrama Gupta	European Commission Humanitarian Aid
5	Ranjita Mohanty (Dr)	Society for Participatory Research in Asia, New Delhi
6	Shipra Maitra	Amity School Of Urban Management
7	Siddhartha Prakash	World Bank
8	Surendra Nath	Government of India
9	Surinder Jodhka (Prof)	Indian Institute for Dalit Studies
10	Swaran Singh Grover	Department of information Technology
11	V. K. Nangia (Dr.)	IIT Roorkee University
12	Vijay Singh	DLF SEZ Developer Ltd
13	Yogesh Anand	Housing & Urban Development Corporation Ltd.

### Governance & Social Research (State)

Nr.	Name	Organisation
1	Gautam Pal	State Urban Development Agency, West Bengal
2	Imtiyaz Mansuri	JANpath NGO Network
3	Joseph antony	Welfare Services Ernakulam, Bank of Baroda
4	Milan Dinda	United Nations Development Program DSW/NACO/CINI/CARE India
5	Prahlad Shirsath	NR International Ltd, Oxfam
6	Praveen Sriram Shetty	Society for Participatory Research in Asia (PRIA)
7	Rajaretnam Thankaperumal	Population Research Centre, Dharwad
8	Rijit Sengupta	Consumer Unity and Trust Society International
9	Satya Mishra	Xavier Institute of Management / Adam Smith Institute
10	Udai S. Mehta	Consumer Unity and Trust Society International
11	Vera Kerketta (Ms)	Socio Economic & Education Development Society

### Senior Stakeholder

Nr.	Name	Organisation
1	Abhis Sen	The Corporate Profiles
2	Alex George	Save The Children
3	Alok Ranjan Chaurasia	Institute of Economic Growth
4	Anjana Chellani	International Labour Organization
5	Anupam Dubey	JPS Associates Pvt. Ltd.
6	Aruna R.	NASSCOM Foundation
7	Atanu Ganguli	Society of Indian Automobile Manufacturers

8	B. Kumar Panda (Dr.)	The National Institute of Educational Planning and Administration, Delhi, India
9	Balaji Raman	India Telecom Government of India
10	Basanta Kar (Mr.)	CARE India
11	Binod Khadria (Mr.)	Jawaharlal Nehru University
12	Challa Ganapathirao	National bank for Agricultural and Rural Development (NABARD)
13	Dilip Kumar	Patna University
14	Ganesh Prasad	Madras Institute of Development Studies
15	Gaurav Singh	NASSCOM Foundation
16	Gopala Krishna	Canara Bank School of Management Studies
17	J. P. Arya	Prime Minister Office
18	Jayanta Chakraborty	Marketing And Research Team
19	Leslie Browne	OXFAM India
20	M.E. Khan (Dr)	Population Council
21	Marc Soeguet	International Labour Organization
22	Meenu Mishra	University of Petroleum and Energy Studies
23	Neerchal Balakrishnaraj	World Bank assisted Sujala Watershed Project, Government of Karnataka, Bangalore
24	P. Geetha Rani (Dr.)	The National Institute of Educational Planning and Administration, Delhi, India
25	Pratibha Mudgerkar	Institute of rural development and Research
26	R. Fernandes	NASSCOM Foundation
27	R. S. Bora	Institute of Economic Growth
28	Rashmi Dewan (Dr.)	The National Institute of Educational Planning and Administration, Delhi, India
29	Ritwick Dutta	Legal Initiative for Forest and Environment
30	S.Prabahara Doss	The Leprosy Mission Trust India
31	Saroj Pachauri	Population Council
32	Sherin Khan	International Labour Organization
33	Shireen Jejeebhoy (Dr)	Population Council
34	Shireen Miller (Ms)	Save the Children
35	Shobha Ahuja (Ms.)	PHD Chambers
36	Shubhangi Sharma (Dr)	OXFAM India
37	Sumeeta Banerji (Ms)	UNDP
38	Tapas Kumar Sen (Dr.)	National Institute of Public Finance and Policy
39	V. P. S. Raju (Dr.)	The National Institute of Educational Planning and Administration, Delhi, India
40	Vaishali Sharma Mahendra (Ms)	Population Council