Agenda

- 12:00 Welcome
- 12:15 ISCB management on goals for phase IV
- 12:30 Questions
- 13:00 DBT policies and wishes for phase IV
- 14:00 Questions
- 14:15 ISCB mgt on the outcome of the workshop in India
- 14:45 Questions
- 15:15 Break (with drinks and snacks)
- 15:45 Presentation of the proposal documents and answers to questions
- 16:15 Last round of questions
- 16:30 Open time for participants to find partners and discuss
Stakeholders

Farmer  Research  Private & Public product development  Extension

Farmer's needs

Marketing  Extension  Dissemination

Multistakeholder platform

Basic research  Translational research

Regulation, Product development  Scale up, Production

External Factors

Policy  Market  Society  Other Technologies
ISCB JAC
1. Why to integrate socio-economics in biotechnology research?

New research idea / research project in biotechnology for agriculture

Starting point

Question 1

Does it work?
The answer will be provided by the biotechnology research

Question 2

Does it pay?
The answer will be provided by socio-economic research

Question 3

Does it fit?
The answer will be largely provided by socio-economic research
Where is socio-economic research needed?

Farmers’ needs identification, 2nd round

farmer's needs

Are farmers’ needs really addressed? Validation / verification

basic research

How do farmers respond to the innovation?

translational research

Are farmers / consumers ready to buy the product?

ISCB circular value chain approach

production

product development

Is the price acceptable?

marketing

Are the intermediaries (extension, small businesses) interested?

distribution

What are the key arguments to sell the product?
Fundamental vs Practice oriented biotechnology research

Research products

→ Peer reviewed publications

→ PhD, MSc and BSc

→ Conferences, seminars, etc.

→ Biotechnology products (e.g. improved seeds, biofertilisers, etc.)
What are the products likely to reach the market?

**Products**

- Improved **seeds** of finger millet / pigeon pea
- **Biofertilisers** for production of finger millet / pigeon pea
- **Biopesticides** for production of finger millet / pigeon pea
- New **types** of finger millet / pigeon pea

**Clients**

- **Input suppliers and farmers**
- **Food industries and consumers**
Research network organisation

a. Organising the network
b. Linking researchers in a transdisciplinary dialogue

Research network

<table>
<thead>
<tr>
<th>Lead</th>
<th>Partner</th>
</tr>
</thead>
<tbody>
<tr>
<td>Biotechnology institutes</td>
<td>Socio economic institutes</td>
</tr>
<tr>
<td>At least 2 institutes (one Indian and one Swiss) are engaged in biotechnology research</td>
<td>At least 1 (2?) institutes (one Indian and one Swiss?) are engaged in socio-economic research</td>
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</table>

The socio economic research questions shall be formulated jointly (research network leader and leaders of the socio economic institutes)
## ISCB Research networks

<table>
<thead>
<tr>
<th>Lead (biotech. research)</th>
<th>Farmers’ representatives</th>
<th>Socio-economics</th>
<th>Private sector</th>
<th>Policy representatives</th>
</tr>
</thead>
<tbody>
<tr>
<td>Partner</td>
<td>Consult + participate</td>
<td>Partner</td>
<td>Consult + participate</td>
<td>Consult</td>
</tr>
<tr>
<td>• Conduct the core research</td>
<td>• Assess the adequacy of the research projects</td>
<td>• Assess feasibility / relevance for smallholder farmers</td>
<td>• Assessment of the demand</td>
<td>• Create conducive framework conditions for smallholder farmers</td>
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<tr>
<td>• Develop new technologies</td>
<td>• Express the needs for extension support</td>
<td>• Monitor impact of the programme</td>
<td>• Development of new products (for farmers or for consumers)</td>
<td>• Adapt policies to the needs of smallholder farmers</td>
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<td>• Coordinate research</td>
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<td></td>
<td></td>
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<tr>
<td>• Manage resources?</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>• Research funds</td>
<td>• Fees for special inputs and meetings</td>
<td>• Research funds</td>
<td>• Fees for participation in meetings</td>
<td>• Allowance for meetings</td>
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Research network organisation

a. Organising the network
b. Linking researchers in a transdisciplinary dialogue

- At the end of the selection process, there shall be **3 to 4 research networks**, each network under the leadership of a biotechnology institute.

- **Integrated in** each network there shall be adequate socio-economic research competencies to address the key issues in that field.

- The networks shall organize the exchange of information in a way that socio-economists and biotechnologists are aware of their colleagues’ research (**transdisciplinary dialogue**).

- In case socio-economic research questions of **general relevance** (for several or all research networks) arise, specific mandates may be given jointly to socio-economic researchers to address those issues. The results shall be transmitted to all concerned networks.
4. **Funding socio-economic research**
   
a. Indian institutions  
b. Swiss institutions  

- There are budget lines in the new project phase for socio-economic research on both Swiss and Indian side.
- Unused budget on one side cannot be transferred to the other side.
- Therefore, is it advisable to involve at least one Indian and one Swiss socio-economic institute in each research network.
- Overall socio-economic issues that are relevant for several or all research networks (e.g. market study for finger millet) may be funded through TAU (limited budget line available ?)
**ISCB biotechnology and socio-economic research integration**

Established as the result of the workshop of 1.8.13 in New Delhi

<table>
<thead>
<tr>
<th>Deadlines</th>
<th>Biotechnology applicants</th>
<th>Socio-economic applicants</th>
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<tbody>
<tr>
<td>30.8.2013</td>
<td>Submission of proposed reviewers (leave out socio-economic) reviewer for the network</td>
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<tr>
<td>15.9.2013</td>
<td>Full-proposal submission with, in the socio-economic (SE) section, the biotech network's own idea of which type of SE research they would see fit to integrate in the project (leave SE budget blank) and why.</td>
<td>Pre-proposals with new form which will be given by ISCB in the next 2 weeks (from 1.8.13)</td>
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<tr>
<td>15.9.-15.10.2013</td>
<td>Peer-review of full-proposals</td>
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<td>31.10.13 (approx.)</td>
<td>Selection of 3-4 biotechnology networks</td>
<td>Selection of SE partners by ISCB</td>
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<td></td>
<td>Matching of biotech/SE institutes by ISCB</td>
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<tr>
<td>30.11.2013</td>
<td>Completed proposal submission with biotech and SE content integrated (NB: A network can still be rejected at this stage if no care is given to this step)</td>
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<tr>
<td>30.11.-15.12.2013</td>
<td>Establishments of contracts between the 3-4 networks (with biotech and SE) and ISCB</td>
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<tr>
<td>December 2013/Jan 2013</td>
<td>First network workshops with core, extended core and shell partners</td>
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- Those biotechnological institutes who have a SE partner can already build their SE ideas into the biotechnology proposal but re-negotiations may take place if ISCB find the topic of SE research is ill chosen. Please consult the documents produced during the 1.8.13 workshop to orientate your ideas.
- Those biotechnological institutes who do not have an SE partner try to think of which type of SE research would be meaningful to them and to the food security of small and marginal farmers and imbed it in the biotechnology proposal in the spaces designated to this effect in the full-proposal form that you already have if you have registered into the ISCB “myEPFL” platform.

Swiss participants can ask their questions at the Bern workshop on 7.8.13. Indian participants can contact ISCB management in Switzerland and will get an answer after 7.8.2013.
Documents from the 1.8.13 workshop in India can be found on [http://iscb.epfl.ch/page-94212.html](http://iscb.epfl.ch/page-94212.html) or [http://isb.epfl.ch](http://isb.epfl.ch) then look for the tab “events” then click 2013
Group work on August 1\textsuperscript{st} 2013

Questions to all 3 groups: the groups work in parallel on the same questions

1. **SE research questions (RESEARCH CONTENTS)**
   - What are your comments on the presented SE research questions (general and specific questions, questions on seeds, inputs and products)
   - Do you have internal competencies to address such research questions

2. **Research network organisation (TENDER PROCEDURE)**
   - How can SE institutions complement / add value to biotechnology research?
   - Where do you see opportunities and threats of the proposed research network interactions?

3. **Matching Biotech and SE partners (RESEARCH PARTNERSHIPS)**
   - Should TAU / ISCB match the partners or should the matching be left to the research institutions themselves?
   - How do you think that Swiss SE institutions can contribute to research partnerships / whole research networks?
GROUP I
Group work on August 1st 2013

1. SE research questions (RESEARCH CONTENTS)
   • What are your comments on the presented SE research questions (general and specific questions, questions on seeds, inputs and products)?

   • Impact – Returns, nutrition, equity, environmental, gender, efficiency
     Expost? Methodological issues

   • Adoption – Determinants – Perception – Structural rigidities

   • Regulatory-Macro, Seed Sectors

   • Obsolescence of biotech products

   • Do you have internal competencies to address such research questions?

ISEC, ICRISAT, IEG, TNAU, NAARM, IARI, RIS (Macro)
Group work on August 1<sup>st</sup> 2013

2. Research network organisation (TENDER PROCEDURE)
   • How can SE institutions complement / add value to biotechnology research?

   *First time-great opportunity to work together*

   • Where do you see opportunities and threats of the proposed research network interactions?

   *We should have a conscientious approach towards Indian realities*

   *Feed back to the biotech scientists to fine tune to technology trajectory*
3. Matching Biotech and SE partners (RESEARCH PARTNERSHIPS)
   • Should TAU / ISCB match the partners or should the matching be left to the research institutions themselves?

   TAU/ ISCB to be given the scope for selection based on expression of interest

   • How do you think that Swiss SE institutions can contribute to research partnerships / whole research networks?

   SE Swiss institutions can be part of network: participating in workshops and deputing graduate students
Group II
1. SE research questions (RESEARCH CONTENTS)

What are your comments on the presented SE research questions (general and specific questions, questions on seeds, inputs and products)?

- Impact studies of new research
- Baseline is needed for all stakeholders - finger millet and pigeon pea
- Statistical issues
- ITKs/Local varieties/germplasm/practices
- Technology should be context specific
- Adoption studies
- Yields/ adoption/ technology / information /delivery gaps
- Characterization of social system
- Dietary pattern changes, nutritive push, food safety
- Information flow
- Economics of competing crops
- Climate resilience
- Compulsion into choices
- Impact on biodiversity, biosafety
- Externality of technology
- Long term technology forecasting
- Regulation, labelling
- Technology evaluation should be independent, farmer participatory

- Do you have internal competencies to address such research questions?

No answer
Group work on August 1\textsuperscript{st} 2013

2. **Research network organisation (TENDER PROCEDURE)**
   - How can SE institutions complement / add value to biotechnology research?
     - Right from the beginning
     - Setting of the research agenda for biotechnologies
     - In process of project
     - Felt need of farmers
     - Indigenous systems

   - Where do you see opportunities and threats of the proposed research network interactions?
     - Know more about the science part
     - Two-way transfer of knowledge
     - Partnership
Group work on August 1\textsuperscript{st} 2013

3. Matching Biotech and SE partners (RESEARCH PARTNERSHIPS)
   • Should TAU / ISCB match the partners or should the matching be left to the research institutions themselves?

   \textit{ISCB should match the partners}

   • How do you think that Swiss SE institutions can contribute to research partnerships / whole research networks?

   \textit{Contribute to capacity building, new methods of market intervention, share experience}
GROUP III
1. **SE research questions (RESEARCH CONTENTS)**

- What are your comments on the presented SE research questions (general and specific questions, questions on seeds, inputs and products)?
- Understand actual problems of ragi farmers, processors, consumers (including how user friendly ragi is in food preparation)
- Productivity is increasing in general, but still productivity gains are not uniform across areas and across years – (pest problem is comparatively low)
- Fortification – variety not available
- Seed availability and adaptability – geography specific
- GM approach Vs non-GM? Whether GM –ragi acceptable is a hypothesis
- For what aspect do we need transgeneics in Ragi
- Value addition is yet to pick up on a large scale to attract marketable surplus from farmers
- Shift in Demand for ragi consumption from urban and peri urban areas as at least 75% of production is consumed on farm
- How to use non-GM approach/technology for high yielding variety in ragi (bio fertilizers... for example)
Group work on August 1\textsuperscript{st} 2013

1. SE research questions (RESEARCH CONTENTS)
   • What are your comments on the presented SE research questions (general and specific questions, questions on seeds, inputs and products)?
   • \textit{Ragi demand is picking up by diabetic population (gluten intolerance patients) - rich in calcium}
   • \textit{No alternative crops / technologies in Ragi productivity enhancement – new technologies will be welcome by farmers}
   • \textit{Market capitalization and popularization strategies required}
   • \textit{Farmers choice for sowing Ragi and what factors will influence farmers choice. E.g. profitability, market demande}
   • \textit{Baseline information is necessary}
   • \textit{Non GM regulations issues?}
   • \textit{Transaction cost of procurement and procurement issues}
   • \textit{Not included in PDS – what would be the alternative ?}
   • \textit{On farm trials, studies needed to gather information on farmers’needs}
   • \textit{PROCESSING OF PIGEON PEA FROM PULSE TO DHAL (VALUE ADDITION IS HIGH and can be captured by farmers in villages (experience of NAIP experiment of Dr N Nagaraj in Chitradurga)}
   • Do you have internal competencies to address such research questions?
   \textit{Yes competencies are at hand in the members of the group}
Group work on August 1st 2013

2. Research network organisation (TENDER PROCEDURE)
   • How can SE institutions complement / add value to biotechnology research?
   • Post harvest – socio economic studies, identify gaps, policy interventions
   • Socio economics can add to biotech research through policy dialogues, removing the fear if any, environmental concerns, pesticide costs may have reduced, but what about the active ingredients (in the case of Bt cotton for example) – demystify
   • How do we translate from land or field to lab, the problems to solutions, what could be changed or how farmers needs can be addressed, strengthen feed back loop
   • Technology provision as a package (POP), effective regulatory mechanism for supply of seeds and inputs (certain states have problems in getting quality seeds)

   • Where do you see opportunities and threats of the proposed research network interactions?
   • Tech projects are long drawn, while opportunities exist throughout the project life cycle, continuity of thoughts, needs sustenance of patience among partners, also operational costs increase, transaction costs of managing also may increase
Group work on August 1\textsuperscript{st} 2013

3. Matching Biotech and SE partners (RESEARCH PARTNERSHIPS)

• Should TAU / ISCB match the partners or should the matching be left to the research institutions themselves?

\textit{It is desirable for ISCB to match the partners}

• How do you think that Swiss SE institutions can contribute to research partnerships / whole research networks?

• \textit{Swiss Se institutions can share their expertise in methodology, impact analysis, capacity building in terms of methodologies, with Indian partners for effectiveness of this project}
• \textit{Opportunities for students, faculty for academic exchange}
• \textit{Opportunities for farmers, policy makers, processors, market functionaries stakeholders in the process}