Safe Food, Fair Food: From capacity building to implementation

Risk-based approaches to improving food safety and market access in smallholder meat, milk and fish value chains in four African countries

Report of the project inception workshop held on 12–13 April 2012 at the International Livestock Research Institute (ILRI), Nairobi

Compiled by Kristina Rösel

April 2012
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Scene setting

Summary

The inception workshop for the project, Safe food, fair food: From capacity building to implementation: Risk-based approaches to improving food safety and market access in smallholder meat, milk and fish value chains in four African countries was held on the ILRI campus, Nairobi, Kenya on 12–13 April 2012. It was attended by 16 participants from 11 partner institutions from 9 countries (Annexes 1 and 2). The workshop focused on team-building, sharing information about partner institutes, planning activities, and administrative arrangements. This report summarises the discussions and presentations.

Project vision

The vision remains the same as in the previous phase: improving the livelihoods of poor producers and consumers of livestock products in sub-Saharan Africa by reducing the health risks associated with food (Safe Food) and by improving nutrition and market access for poor smallholders (Fair Food). Whereas from 2008 to 2011, the first phase of the Safe Food, Fair Food (SFFF) project (SFFF1) focused on building capacity, the existing and well-established partnerships and findings from the first phase will now be used to implement risk management and communication strategies in order to improve food safety in five selected value chains in four countries in sub-Saharan Africa.

Project context

BMZ/GIZ funding requires that the project be aligned with the new CGIAR Research Programs. That is why five value chains in four countries in sub-Saharan Africa were selected: dairy in Tanzania, pig and aquaculture in Uganda as well as small ruminants in Mali and Ethiopia¹. Partners participating in SFFF1 but from countries which are beyond these focus countries – in our case Kenya, Mozambique, South Africa, Ghana and Côte d’Ivoire – had to be briefed on these institutional agendas so as to not make them feel excluded. On the contrary, it was explained, discussed and approved that in the long term, impact deriving in the focus countries will eventually be scaled out regionally. Also, their expertise in food safety and affiliations with regional economic communities will be highly appreciated in the course of Safe Food, Fair Food 2 (SFFF2).

The CGIAR Research Programs are multi-centre, multi-partner initiatives built on three core principles: impact on the CGIAR’s four system-level objectives; making the most of the centres’ strengths; and strong and effective partnerships (annex 3). ILRI is leading the research program, More meat, milk and fish by and for the poor, and one of the four components of the research program, Agriculture for Improved Nutrition and Health, namely the component on agriculture-associated diseases. SFFF2 will integrate risk analysis tools for food safety into these mega programs’ value chain transformation approach to increase the quantity and quality of animal sourced foods in sub-Sahara Africa.

¹ Finalization of the aquaculture value chain is still under discussion with WorldFish
Project outline: What, when and why

- **Rapid risk assessment in five value chains in four countries in sub-Saharan Africa 2012–2013**
  - Participatory risk analysis developed in SFFF1 (2008–11) for linked multi-pathogen risk and economic assessment of five high-potential value chains.
- **Stakeholder workshop and priority setting and identification of areas for action research 2013**
  - Using a stakeholder approach to improve need identification, set priorities for intervention based on the findings from the rapid assessment and to discuss best-best intervention strategies.
- **Action research to manage priority risks in each of the five value chains 2013–2015**
  - Development and testing of a package of market-based interventions that enable risk-based approaches to food safety in each of the five focus value chains.
- **Monitoring and evaluation strategy for enabling environment 2012–2015**
  - Assessment of interventions will address effectiveness, efficiency, equity, appropriateness, costs and benefits.
- **Engagement with regional economic communities 2012–2015**
  - Enabling environments engage and influence policymakers, the public and private sector.
- **Dissemination of lessons and tools 2014–2015**
  - Research briefs, policy briefs, peer-reviewed papers, theses, conferences and stakeholder meetings
- **Upgraded curricula 2015**
  - Training of veterinary and public health officers for better disease and surveillance by applying inspection tools and participatory risk analysis tools.
Progress

Progress against milestone check list

Year One
✓ First annual planning meeting Nairobi, Kenya – COMPLETED
✓ Administrative arrangements and institutional agreements established – ONGOING
✓ Website update – ONGOING
✓ Development of outcome mapping strategy – ONGOING (SET FOR MAY 28/29)
✓ Rapid integrated assessment of 5 value chains – STARTING IN MAY 2012
✓ Rapid assessment follow up meeting with stakeholders
✓ Recruitment of 5 students for action research – ONGOING
✓ One-week writeshop for SFFF1 outputs – SET FOR NOV 2012

Year Two
✓ Second annual planning meeting Kampala, Uganda
✓ Training courses for students
✓ Field piloting of interventions
✓ Upgrading curricula

Year Three
✓ Third annual co-ordination meeting Berlin, Germany – link with Tropentag
✓ Post-graduate students submit theses
✓ Evidence and tools disseminated
✓ Impact assessment on interventions
### Next steps

<table>
<thead>
<tr>
<th>Activity</th>
<th>Who</th>
<th>By when</th>
</tr>
</thead>
<tbody>
<tr>
<td>Circulate final report SFFF1 to country coordinators</td>
<td>ILRI</td>
<td>asap</td>
</tr>
<tr>
<td>Comment and approve final report</td>
<td>AAU, BIR, CSRS, FUB, INIVE, UoH*, UoN, UoP* SUA</td>
<td>April 30, 2012</td>
</tr>
<tr>
<td>Circulate intellectual property agreement and publication agreement for comment and consensus (to be added to CRAs)</td>
<td>ILRI</td>
<td>April 30, 2012</td>
</tr>
<tr>
<td>Internal communication: set up Dropbox for sharing files and documents; establish project update mailing list for monthly email update</td>
<td>ILRI</td>
<td>April 30, 2012</td>
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<tr>
<td>External communication: update project website for external communication</td>
<td>ILRI</td>
<td>May 30, 2012</td>
</tr>
<tr>
<td>Agree administrative arrangements. Partners are to inform the project coordinator which is the most suitable (a) CRA (b) Consultancy (c) Combination</td>
<td>Partners: AAU, BecA, BIR, CSRS, FUB, INIVE, MAK, RGU, SUA, UG, UoN</td>
<td>May 31, 2012</td>
</tr>
<tr>
<td>Develop deliverables, protocols, timeline and budget (TOR) available for main activities for the next 3 years in each of the focus countries: rapid assessment, students or other beneficiary of capacity building, action research, RECs</td>
<td>ILRI</td>
<td>May 31, 2012</td>
</tr>
<tr>
<td>Circulate format for 6-monthly reporting</td>
<td>ILRI</td>
<td>April 30, 2012</td>
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<tr>
<td>Progress report</td>
<td>Partners</td>
<td>August 31, 2012 and January 31, 2013</td>
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<tr>
<td>Procurement support needs; partners are to inform ILRI if they will need support with procurement.</td>
<td>Partners</td>
<td>June 30, 2012</td>
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<tr>
<td>Develop M&amp;E and outcome mapping strategy for rapid risk assessment and intervention research (risk management &amp; risk communication)</td>
<td>CSRS, ILRI, UoN</td>
<td>May 31, 2012</td>
</tr>
<tr>
<td>Circulate report on M&amp;E strategy</td>
<td>ILRI</td>
<td>June 30, 2012</td>
</tr>
<tr>
<td>Circulate tool box “dairy Tanzania” developed at ILRI</td>
<td>ILRI</td>
<td>April 27, 2012</td>
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<tr>
<td>Review by SFFF team</td>
<td>Partners</td>
<td>May 1, 2012</td>
</tr>
<tr>
<td>Submit information and materials for rapid assessment (see 4.1) to project coordinator</td>
<td>Tanzania: May 1, 2012 Others: May 31, 2012</td>
<td>May 2012</td>
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<tr>
<td>Uganda</td>
<td>ILRI, MAK, FUB, BIR, RGU</td>
<td>June-Aug 2012</td>
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<tr>
<td>Ethiopia</td>
<td>ILRI, AAU, FUB</td>
<td>Sept-Oct 2012</td>
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<tr>
<td>Mali</td>
<td>ILRI, CSRS, FUB</td>
<td>Depends on Livestock and Fish decision (by June 15, 2012)</td>
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<tr>
<td>Egypt</td>
<td>ILRI, WorldFish, CSRS, UG</td>
<td>Follow up by end April, 2012</td>
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<tr>
<td>Write research recommendations for value chain</td>
<td>ILRI, partners</td>
<td>Dec 2012</td>
</tr>
<tr>
<td>Stakeholder meetings in focus countries for priority setting and best-bet interventions</td>
<td>ILRI, partners and stakeholders</td>
<td>March 2013</td>
</tr>
<tr>
<td>Propose criteria for students: PhD, MSc with stipend, MSc field only, post-doc</td>
<td>Country coordinators</td>
<td>August 2012</td>
</tr>
<tr>
<td>Identify 5 MSc/PhD students</td>
<td>ILRI, partners</td>
<td>Dec 2012</td>
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<tr>
<td>training on participatory risk assessment</td>
<td>RGU</td>
<td>September 2012</td>
</tr>
<tr>
<td>Cluster and individual research</td>
<td>ILRI, partners</td>
<td>2013-2015</td>
</tr>
<tr>
<td>Suggestions on contents for general 2 week core training to project coordinator</td>
<td>ILRI, Partners</td>
<td>Dec 2012</td>
</tr>
<tr>
<td>Follow up on additional fundraising possibilities</td>
<td>ILRI, partners</td>
<td>always</td>
</tr>
<tr>
<td>Explore possibilities of in-house training and costs for project students</td>
<td>CSRS, BecA, BIR, FUB</td>
<td>June 30, 2012</td>
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<tr>
<td>Training of paravets in Ethiopia</td>
<td>FUB</td>
<td></td>
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<tr>
<td>Writeshop in Côte d’Ivoire for outputs of SFFF1</td>
<td>SFFF1 country coordinators</td>
<td>November 30, 2012</td>
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<tr>
<td>Develop TOT manual from SFFF1 course presentations</td>
<td></td>
<td>December 31, 2013</td>
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</tbody>
</table>

* UoH (University of Hohenheim) and UoP (University of Pretoria) were partners in SFFF1
<table>
<thead>
<tr>
<th>Name</th>
<th>Country</th>
<th>Type of organization</th>
<th>Contacts</th>
</tr>
</thead>
<tbody>
<tr>
<td>Addis Ababa University (AAU)</td>
<td>Ethiopia</td>
<td>Knowledge institute</td>
<td>Girma Zewde</td>
</tr>
<tr>
<td>Biosciences eastern and central Africa (BecA)</td>
<td>Kenya</td>
<td>Bioscience research hub</td>
<td>Appolinaire Djkeng</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>Francesca Stomeo</td>
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<td>Mark Wamalwa</td>
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<td>Appolinaire Djkeng</td>
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<td>Francesca Stomeo</td>
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<td></td>
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<td></td>
<td>Mark Wamalwa</td>
</tr>
<tr>
<td>Federal Institute for Risk Assessment (BfR)</td>
<td>Germany</td>
<td>Government department</td>
<td>Juliane Braeunig</td>
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<td></td>
<td></td>
<td></td>
<td>Alexandra Fetsch</td>
</tr>
<tr>
<td>Centre Suisse de Recherches Scientifiques en Côte d’Ivoire (CSRS)</td>
<td>Cote d’Ivoire</td>
<td>Research institute</td>
<td>Bassirou Bonfoh</td>
</tr>
<tr>
<td>Free University Berlin (FUB)</td>
<td>Germany</td>
<td>Knowledge institute</td>
<td>Max Baumann</td>
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<td></td>
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<td>Reinhard Fries</td>
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<td>Peter-Henning Clausen</td>
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<td>Kristina Rösel</td>
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<tr>
<td>International Livestock Research Institute (ILRI)</td>
<td>Kenya</td>
<td>International agricultural research centre</td>
<td>Delia Grace</td>
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<td>Amos Omore</td>
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<td>Saskia Hendrickx</td>
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<td>Mohamadou Fadiga</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>Abdou Fall</td>
</tr>
<tr>
<td>National Veterinary Research Institute of Mozambique (INIVE)</td>
<td>Mozambique</td>
<td>National agricultural research system</td>
<td>Helena Matusse</td>
</tr>
<tr>
<td>Makerere University (MAK)</td>
<td>Uganda</td>
<td>Knowledge institute</td>
<td>Francis Ejobi</td>
</tr>
<tr>
<td>Rakuno Gakuen University (RGU)</td>
<td>Japan</td>
<td>Knowledge institute</td>
<td>Kohei Makita</td>
</tr>
<tr>
<td>Sokoine University of Agriculture (SUA)</td>
<td>Tanzania</td>
<td>Knowledge institute</td>
<td>Lusato Kurwijila</td>
</tr>
<tr>
<td>University of Ghana (UG)</td>
<td>Ghana</td>
<td>Knowledge institute</td>
<td>Kwaku Tano-Debrah</td>
</tr>
<tr>
<td>University of Nairobi (UoN)</td>
<td>Kenya</td>
<td>Knowledge institute</td>
<td>Erastus Kang’ethe</td>
</tr>
<tr>
<td>WorldFish</td>
<td>Egypt</td>
<td>CG Centre</td>
<td>Malcolm Beveridge</td>
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<td></td>
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<td>Malcolm Dickson</td>
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</table>

**Addis Ababa University** is one of the largest higher learning institutions in Africa and the oldest higher educational institution in Ethiopia. AAU started its operation in 1950 under the name University College of Addis Ababa. It was renamed Haile Selassie I University in 1962 and then Addis Ababa University in 1975.

The **Biosciences eastern and central Africa** hub is an initiative developed within the framework of Centres of Excellence for Science and Technology in Africa. Hosted and managed by the International Livestock Research Institute (ILRI) in Nairobi, Kenya, the BecA Hub provides a common biosciences research platform, research-related services and capacity building opportunities to the region and beyond. BecA exists to increase access to affordable, world-class research facilities and to create and strengthen human resources in biosciences and related disciplines in Africa.

The **German Federal Institute for Risk Assessment** was set up in November 2002 to strengthen consumer health protection. It is the scientific agency of the Federal Republic of Germany which is responsible for preparing expert reports and opinions on food and feed safety as well as on the safety of substances and products.

**Centre Suisse de Recherches Scientifiques en Côte d’Ivoire** was founded in 1951. Its mission is to encourage and support north-south research partners in West Africa, according to national and regional priorities.

The **Free University of Berlin (Freie Universität Berlin)** is the largest of the four universities in Berlin with around 40,000 students. Research at the university is focused on
humanities and social sciences and on health and natural sciences. It was founded in 1948 by students and staff who were relegated from Humboldt University of Berlin because of their political views.

The International Livestock Research Institute creates and integrates research-based knowledge on livestock-based pathways out of poverty, including securing assets of the poor to reduce vulnerability, increasing livestock productivity to improve livelihoods, and increasing livestock incomes by enhancing market access by the poor. It has its headquarters in Nairobi, Kenya, a principal campus in Addis Ababa, Ethiopia, and other offices in southern and West Africa and South, Southeast and East Asia.

The National Veterinary Research Institute of Mozambique is an institution working under jurisdiction of the Ministry of Agriculture of Mozambique (IIAM), with the overall objective to control animal disease and food borne disease. The activities are carried out in coordination with the National Directorate of Livestock (the national veterinary authority) and the Provincial Livestock Service through inspection services.

Makerere University is Uganda's largest and second-oldest higher institution of learning, and was first established as a technical school in 1922. In 1963 it became the University of East Africa, offering courses leading to general degrees from the University of London. It became an independent national university in 1970 when the University of East Africa was split into three independent universities: University of Nairobi (Kenya), University of Dar es Salaam (Tanzania) and Makerere University. Today, Makerere University has 22 faculties, institutes and schools offering programmes for about 30,000 undergraduates and 3,000 postgraduates.

Rakuno Gakuen University is a private university in Ebetsu, Hokkaido, Japan, established in 1960. The predecessor of today’s college of Agriculture, Food and Environmental Sciences, a dairy juku, was founded in 1933 and includes the school of veterinary medicine with 140 veterinary and 60 animal technician students enrolled each year, a wildlife research centre, the environmental science unit and Japan’s first veterinary epidemiology unit.

Sokoine University of Agriculture began in 1964 as an agricultural college offering diploma in agriculture. It was elevated to a faculty of agriculture in 1969 and established as a university in 1984. It has three faculties: agriculture, forestry and veterinary medicine.

The University of Ghana is the oldest and largest of the five Ghanaian public universities. It was founded in 1948 as the University College of the Gold Coast, and gained full university status in 1961. It now has nearly 24,000 students and is mainly based at Legon, about twelve kilometres north-east of the centre of Accra.

The University of Nairobi is the largest university in Kenya. Its history as an educational institution goes back to 1956, and it has been an independent university until 1970. It has around 30,000 enrolled students and six campus colleges including the College of Agriculture and Veterinary Sciences.

WorldFish is an international, non-profit research organization dedicated to reducing poverty and hunger by improving fisheries and aquaculture. Working in partnership with private and public sectors and civil society, WorldFish develops pro-poor sustainable aquaculture that supports the Millennium Development Goals. With a comprehensive approach, the centre prioritizes its research efforts to include those areas in which it will have the biggest impacts, and assumes the role of broker and catalyst of research among the full range of development partners needed to close the gap between research and development action.
In the second session, all partners introduced themselves and their institutes and gave an overview of how they want and are able to contribute to the success of the project. We also audited the skills and experience located in the project which could be called on to support project activities.

<table>
<thead>
<tr>
<th>Partner</th>
<th>Contributions</th>
</tr>
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</table>
| CSRS, Bassiou Bonfoh    | - Capacity building: AfriqueOne (PhD, Postdoc), OneHealth NextGen (Msc)  
- Training: Regional training unit at CSRS, École Inter-États des Sciences et Médecine Vétérinaires in Dakar, Senegal (EISMV, 15 member states), International Graduate School (IGS)  
- Resources: Labs and fields stations, Health & Demographic Surveillance System (HDSS)  
- Strong connections with ECOWAS and EISMV |
| FUB, Peter-Henning Clausen | - Supervision action research pigs Uganda  
- Cooperation in Germany with Robert-Koch-Institute, Helmholtz-Institute |
| MAK, Francis Ejobi       | - Interdisciplinary departments (biosecurity, vet med)  
- Contribution towards rapid assessment and action research in the pig value chain in Uganda  
- Bond with EU universities |
| BfR, Alexandra Fetsch (Juliane Bräunig) | - Contribution towards dairy value chain in Tanzania  
- expertise in the field of risk assessment, microbiology, (detection/typing) methodology, risk communication  
- Regional training courses (2-3 in 3 years)  
- Laboratory training on zoonotic pathogens at BfR  
- Official collaboration with FUB |
| FUB, Reinhard Fries (Max Baumann) | - Expertise towards 1-2 value chains (expertise in pigs, poultry, small ruminants)  
- supervision of one student (sandwich programme)  
- Develop a counter model consisting of good practices and verification procedures  
- Training & education (Textbook nearly finalized), proposal submitted for training of paravets and technicians |
| ILRI Mozambique, Saskia Hendrickx | - Good knowledge of region & established relationships with relevant organizations [SADC food safety program, CARDESA; university of Pretoria (Cheryl McGinn)]  
- Capacity to support field work (in Mozambique)  
- Veterinary epidemiologist |
| UoN, Erastus Kang’ethe | - National and regional expertise and network with Regional Economic Commissions and universities  
- Action research on mycotoxins dairy value chain TZ |
| SUA, Lusato Kurwijila | - Special pre-entry science programmes have enhanced female student enrolment at SUA  
- Soil & water centre of excellence  
- MSc Public Health and Food Safety – NEW since 2011  
- Molecular biotechnology and biology → malaria and other parasites |
| RGU, Kohei Makita | - (Probably) shared coordination with Kristina  
- Risk analysis technical backstopping  
- Training in food safety risk analysis in Japan → 4 scholarships for training Sept 3-12, 2012 (SFFF2 students)  
- Helping in designing action research studies  
- Field expertise in pigs in Uganda (value chain mapping, sampling) |
| INIVE, Helena Matusse | - Best practice example of 3M™ Petrifilm → was great success  
- Expertise: Mycotoxins, Salmonella spp., Listeria spp., Escherichia coli etc.; feed, milk, meat, import/export |
| UG, Kwaku Tano-Debrah | - capacity to supervise graduate students (up to PhD) and to host (local and international) students for graduate training in several disciplines the project |
draws in – such as food science, microbiology, public health, economics, sociology etc.
- nomination of a student to participate in the execution of the research protocols

| AAU, Girma Zewde | capacity to conduct work shop on food safety (HACCP)
- Expertise in meat (export/local abattoirs/beef eaters “keywot” and *Taenia saginata*); dairy; poultry

| BecA, Francesca Stomeo, Mark Wamalwa (Appolinaire Djikeng) | Multi-pathogen-detection: genomics and metagenomics-based investigation of microbial communities in meat, milk and fish
- Global bacterial survey using 16S rRNA gene amplification, sequencing and analysis (16S rRNA gene: highly conserved in all bacteria)
- Global metagenomics survey of viral-enriched (and bacterial) samples
- Data will be analysed using various bioinformatics strategies to develop a catalogue of microbe species and groups that represent threats to corresponding value chains. This will also validate the participatory appraisal.
- Targeted survey of suspected or known pathogens (from the RA)
- Presence or absence of one or several viruses
- Highly representative - Molecular Diagnostics (capillary sequencing; next generation sequencing using 454 GS pyrosequencer; Sanger; Virochip) |
Planning of activities

Rapid risk assessment

**Objective**
Develop a One Health manual to guide the rapid assessment of human and animal health risks in informal value chains and conduct assessments in at least 5 value chains of interest to the CGIAR Research Program on Livestock and Fish.

**Deliverables**
- 2012 Draft One Health Manual on assessing health risks in value chains consisting of protocols and data capture templates, analytic SOPs, quality control mechanisms; some form of this may also figure as a section of the overall VC assessment toolkit publication
- 2012-13 Reports on the Rapid Assessment of value chain identifying key animal health, food safety & zoonoses issues (multiple burden assessment) and recommendations on immediate development interventions to pilot and research opportunities
- 2013-14 Publications of assessments and final version One Health manual; again, some form of this may also figure a section of the overall VC assessment toolkit publication.

**Core components of rapid assessment**
- Participatory risk assessment
- Socio-economic assessment: what makes people change their habits (risk communication, incentives); costs of food safety (policy)
- Biological sampling, (meta)genomics
- Engagement with regional economic communities (RECs), veterinary schools, private sector → stakeholder meeting at the beginning/end of rapid assessment

**Integration**
- Linking with other value chain assessments (feeds, breeds etc.)
- Link with socio-economic constraints analysis (Derek Baker, Mohamadou Fadiga)
- Integrating with other value chain information in order to set holistic priorities and to identify best-bet intervention packages (which link different aspects as a part of a package)

**Constraints**
- Rapid assessment in Tanzania needs to start as soon as possible (completion of assessment by September 2012 is the prerequisite for 4-year grant for action research)
- Rapid assessment of aquaculture (Egypt/Uganda) needs to be confirmed with WorldFish
- Rapid assessment in Mali largely depends on the political developments; food safety activities aligned with CGIAR Research Program; decision to be made by mid June 2012

The introduction was followed by a short breakout session. The participant formed three groups according to the focus value chain (dairy, sheep/goat, pig) and brainstormed on what they would do (and why) for the rapid assessment if they were given a budget of USD 80,000 and a timeframe of eight weeks.
<table>
<thead>
<tr>
<th>What health risks are likely to be present in a given value chain? What is the current Knowledge, Attitude and Practice (KAP) for control?</th>
<th>SHOAT in Mali and Ethiopia (tools)</th>
<th>DAIRY in Tanzania (tools)</th>
<th>PIGS in Uganda (potential outputs)</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Value chain mapping (Regional market)</td>
<td>- literature review, sampling (prevalence, incidence), observation, PRA (interview on awareness level)</td>
<td>parasitic: trichinellosis, cysticercosis, Echinococcus granulosus, Sarcocystis, Toxoplasmosis microbial: Brucella suis, Salmonella spp., Sc. Suis, Campy, E. coli viral: HepE PAH, chemical, ab residues, pesticides, mycotoxins (ergotoxin)</td>
<td></td>
</tr>
<tr>
<td>- Literature review - identify actors for focus group discussions - data for tool kit</td>
<td>- which dairy products are there</td>
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</tbody>
</table>

| What are their likely impacts on animal health and human health, especially for the poor? | hazard/ risk identification: sampling, KAP → genomics | - risk identification: interviews from key informants, observation | fatalities, NCC/ epilepsy, diarrhea, loss of labor (DALY), social isolation, cancer, metabolic disorders |
|---|---|---|
| Cost/Production/ costs of losses/ impact on health → PRA | - impacts on animals/humans - medication - loss of labor - animal records of (V)PH dept’s - testing (metagenomics) | direct costs for control/ diagnosis/ surveillance; awareness/ education; drugs/treatment in animals/humans economic losses (condemnation) |

<table>
<thead>
<tr>
<th>What costs are associated with the risks and their control, particularly from a pro-poor perspective?</th>
<th>Actors’ perspectives (vc stakeholders) and Institutional perspective (regulation) → basis for compromise</th>
<th>Awareness; sanitation; separating dogs from slaughterhouses; confinement; meat inspection; cooking; infrastructure/ prerequisites</th>
</tr>
</thead>
<tbody>
<tr>
<td>What are the existing best-bets for managing these risks?</td>
<td>Assess current practices (good and bad things)</td>
<td>value chain characterization/mapping; prevalence data; exposure; consumption habits; CCPs; husbandry practices; spatial distribution</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>What are the main needs for research into reducing risks for pro-poor value chains, which can be implemented by Livestock and Fish value chain managers? How can this research contribute to reduction of burden?</th>
<th>targeting/ contextualizing engaging or informing the stakeholders – analysis use situational analysis</th>
<th>information transfer (vet) public health infrastructure prioritize nationally/regionally education</th>
</tr>
</thead>
</table>
Things to consider in rapid assessment: Framework

Information audit on food safety in focus countries
- Literature review of student theses – issues, hazards, options
- Review of situational analysis report from SFFF1
- Spatial data
- Country records: health care centres, health departments – issues, hazards, options
- data on present and exceeding levels (according to national and/or regional standards if in place)
- Identify stakeholders and key informants (including RECs, veterinary schools, private sector)

Rapid assessment
- One rapid assessment team: feeds, breeds, socio-economics, health including food safety
- Use peer-to-peer learning on food safety component: student from MAK (Joseph Kungu) to join the Tanzania assessment team to train on the job for the Uganda assessment
- Rapid appraisal one day in 5-20 villages for initial scoping using general purpose questions (max 2 hours)
- In depth-assessment on food safety in every 10th household using questionnaires, observation sampling
- Focus group discussions and participatory epidemiology (tools from SFFF1)
- Probabilistic survey of value chain (mainly smallholder but compare with commercial)
  - Questionnaires: knowledge, attitude, economics, exposure, risk factors
  - Direct observations: practices
  - Biological sampling: integrated (animal health, zoonoses, food safety) on hazards, pathogens, adulteration, health along the risk pathway
- Stakeholder mapping (roles) and links between stakeholders
- value chain mapping (characterization of production systems, marketing chains for animal products, regulations/application)
- risk pathway mapping (production, consumption patterns, perceptions, training)
- stochastic model on participatory and other data (Kohei Makita)

Stakeholder meeting in focus countries
- report back to stakeholder
- feedback
- write research recommendations for CGIAR Research Program value chain
- priority setting
- best-bet interventions

Action points for all SFFF2 partners
- rapid assessment of food safety in the respective value chains through consultancy contracts with country coordinators: budget, time in planning by seniors; data collection by technicians, students
- partners to submit protocols, data capture templates, analytic SOPs, quality control mechanisms to Dropbox – MAY 1, 2012 FOR DAIRY TANZANIA
- all partners to explore resources (manpower and laboratory) for rapid assessment including costs and to submit to project coordinator
- country coordinators to explore possibilities and costs of DNA/RNA isolation in the country for (meta)genomics in order to avoid biosecurity logistics and costs
- country coordinators: break down of how to use country budget of 20,000 USD per country for rapid assessment activities to project coordinator
- MAK to explore participation of student for hands on training during Tanzania dairy assessment (Joseph Kungu)
- BecA to develop workplan for collecting multiple samples and transporting to BecA (also the other data needed, e.g. GPS)
- Partners to suggest what type of DNA/RNA extraction will be possible in the given (food safety) context

Support points from international partners
- Tanzania: BfR (Alex, Juliane) to organize/attend (?) a national planning workshop with all partners
- BfR to provide help on DNA/RNA extraction from food or multipurpose culture (protocols, SOPs)
- Uganda – BfR, FUB (Peter-Henning, Max, Reinhard) in action research
- Ethiopia – FUB (Max, Reinhard) for training of paravets
- Mali – FUB (Peter-Henning)
- RGU (Kohei): value chain mapping, study design, stochastic modelling

<table>
<thead>
<tr>
<th>Action points</th>
<th>By whom</th>
<th>By when</th>
</tr>
</thead>
<tbody>
<tr>
<td>Circulate draft of “tool box”</td>
<td>ILRI</td>
<td>April 27, 2012</td>
</tr>
<tr>
<td>Review by SFFF partners</td>
<td>Partners</td>
<td>May 1, 2012</td>
</tr>
<tr>
<td>Literature review/student theses (issues, hazards, options)</td>
<td>ILRI, partners</td>
<td></td>
</tr>
<tr>
<td>Spatial data</td>
<td>ILRI-PLE (GIS unit)</td>
<td>Tanzania by May 1, 2012</td>
</tr>
<tr>
<td>Identify stakeholders for national workshops</td>
<td>ILRI, partners</td>
<td>Uganda by end May, 2012</td>
</tr>
<tr>
<td>Key informants: best-bet solutions in country</td>
<td>ILRI, partners</td>
<td>Ethiopia/Mali by end July, 2012</td>
</tr>
<tr>
<td>Records in country: Health care centres, health departments – issues, hazards, options</td>
<td>ILRI, partners</td>
<td></td>
</tr>
<tr>
<td>add economic questions</td>
<td>ILRI (Mohamadou Fadiga)</td>
<td></td>
</tr>
<tr>
<td>Food sampling protocols, analytic protocols, SOPs</td>
<td>ILRI, partners</td>
<td></td>
</tr>
<tr>
<td>Available resources (laboratories and staff) for rapid assessment field work</td>
<td>ILRI, BecA, SUA, MAK, AAU, CSRS, BfR, FUB</td>
<td>Tanzania by end April, 2012</td>
</tr>
<tr>
<td>Uganda</td>
<td>ILRI, MAK, FUB, BfR, RGU</td>
<td>June-Aug 2012</td>
</tr>
<tr>
<td>Ethiopia</td>
<td>ILRI, AAU, FUB</td>
<td>Sept-Oct 2012</td>
</tr>
<tr>
<td>Mali</td>
<td>ILRI, CSRS, FUB</td>
<td>Depends on Livestock and Fish decision (by June 15, 2012)</td>
</tr>
<tr>
<td>Egypt</td>
<td>ILRI, WorldFish, CSRS, UG</td>
<td>Follow up by end April, 2012</td>
</tr>
<tr>
<td>Value chain and risk pathway mapping</td>
<td>ILRI, partners</td>
<td>End of 2012</td>
</tr>
<tr>
<td>(meta)genomics</td>
<td>BecA</td>
<td>End of 2012</td>
</tr>
<tr>
<td>Write research recommendations for value chain</td>
<td>ILRI, partners</td>
<td>End of 2012</td>
</tr>
<tr>
<td>Stakeholder meetings in focus countries for priority setting and best-bet interventions</td>
<td>ILRI, partners and stakeholders</td>
<td>March 2013</td>
</tr>
</tbody>
</table>
Action research

- Identification of five students until August 2012 – 2 have been recruited already
- Country coordinators to propose which model of student involvement in action research: PhD, MSc stipend paid, MSc field work only, post-doctorate
- SFFF2 project budget not to cover stipends but field work

Student support and other capacity building

Training on stochastic risk assessment in Rakuno Gakuen University
- from 3rd to 12th September (annex 4)
- Sylvain G. Traoré (CSRS), Joseph Kungu (Makerere University), Daniel Senerwa (University of Nairobi), James Kahunyo (University of Nairobi), Kristina Rösel (ILRI/Free University of Berlin)

Two week core training on risk assessment and especially risk management in Africa
- All SFFF2 partners to send suggestions on contents to project coordinator
- Include handouts
- Course in project year 2, possibly in Kenya

Training in partner institutions
- CSRS, BecA, BfR
- Link existing students who are funded already with SFFF2

Training module for paravets in Ethiopia
- FUB training module being finalized
- Could be linked to Mali and Uganda

Additional funding

Leveraging additional funds was one reason for the success of the previous phase. Hence, a brainstorming session was done on where to apply for additional funds and scholarships.

- Humboldt research fellowship for postdocs http://www.humboldt-foundation.de/web/humboldt-fellowship-postdoc.html
- TWAS-DFG http://twas.ictp.it/prog/exchange/res-collab/twas-dfg
- IAEA – capacity building short training www.iaea.org
- BMBF (German Federal Ministry for Education and Research)
- Milk Mali (UBS, Swiss Bank Foundation) – CSRS
- AfriqueOne training component (e.g. Makerere) – Francis+BB: http://www.afriqueone.net/
- Asia-Africa (JASSOJapan)
• UK Department for international Development DfID : One Health [www.dfid.gov.uk]
• EAPP – Tz, ET, KE, Ug
• Embassies
• ASARECA – Uganda [www.asareca.org]
• BecA-Hub: [http://hub.africabiosciences.org/Capacity_building]
• DAAD [www.daad.de]
• USAID – follow up by Francis Ejobi
• BioInnovate – follow up by Kristina
Communication

We have
- Free access to ILRI communication tools and resources: see annex 5
- Safe Food, Fair Food – internal communications:
  - Dropbox: project files repository (owner Kristina)
  - Monthly update by email (Kristina)
  - Regular mailings to SFFF1 champions on conferences, competitions, calls for proposals, scholarships etc. (Kristina)
- Safe Food, Fair Food - external communications:
  - Safe Food Fair Food website http://ilri.org/safefood/ (will be updated and turned into a more interactive blog with RSS feed etc, admin Kristina)
  - Facebook closed group for SFFF1 champions @ ICOPHAI 2011
  - Brochures
  - Factsheet (GIZ)
  - Situation analysis report ready for last review by SFFF1 country coordinators, Mohammad Jabbar, Kohei Makita, Delia Grace, (Kristina Rösel)
  - Manual participatory risk assessment (Bryony Jones) – to be reviewed/finalized
  - Synthesis book on key messages and 25 briefs – to be reviewed/finalized

We need
- Lessons learned → more policy briefs (one-pager)
- Materials for farmers (extension workers) on awareness and/or education
- Research to Use pathway (regional coordinators, country coordinators)
- Open course (E-learning)

Plan 2012
- Writeshop 5 days in West Africa (Côte d’Ivoire)
- With country coordinators from Sfff1
- Facilitated by CSRS during first half of November 2012

Outputs
- Participatory Risk Assessment Manual (Bryony Jones editing)
- Training of Trainers (TOT) to go along with manual (former SFFF1 students)
- Participatory Risk Assessment Training courseBook on SFFF1
- Policy briefs from vast materials we have (e.g. best practice examples such as MSc Public Health & Food Safety at SUA since 2011; 3M™ Petrifilm success in Mozambique…)
- Lessons learned statement – format into policy brief
- More student papers
Engagement with regional economic communities

Objectives
- To engage with policy-makers in RECs in order to create a more enabling environment for food safety
- To assess current situation and needs
- Provide evidence and create demand for evidence
- To engage with universities and training institutions for curricula development and capacity building
- Communication with country value chains
- Stakeholders: decision-makers, informal market actors, private sector stakeholders

Tools and methodology
- outcome mapping strategy framework (www.idrc.ca/evaluation)
- project strategy to be developed during workshop 28/29th May at ILRI, Nairobi

Participants
- West Africa – Bassirou Bonfoh, CSRS: Economic Community of West African States (ECOWAS www.ecowas.int) and École Inter-États de Sciences et Médecine Vétérinaires de Dakar www.eismv.org
- Southern Africa – Saskia Hendrickx, ILRI: Southern African Development Community (SADC www.sadc.int)
- Joseph Karugia, ILRI policy unit: Association for Strengthening Agricultural Research in Eastern and Central Africa (ASARECA www.asareca.org) and Regional Strategic Analysis and Knowledge Support Team (RESAKSS www.resakss.org)
- Delia Grace, Principal Investigator Safe Food, Fair Food, ILRI
- Amos Omore, Veterinary epidemiologist, ILRI
- Kristina Rösel, Coordinator Safe Food, Fair Food 2, ILRI/FUB

Planned activities
- Initial meeting, training on outcome mapping and developing a strategy through consultant from International Institute for Rural Reconstruction (IIRR www.iirr.org) to conduct workshop on outcome mapping 28+29th May 2012
- Pro-poor policy influence and evaluation of effectiveness of policy research (Bonfoh, Kang’ethe, Hendrickx)
- Periodical visits of stakeholders

Outputs
- Monitoring & evaluation report
- Policy briefs etc. on evidence generated in SFFF and others according to OM strategy

Discussion during inception workshop
- We have tools for scientific communication, students and policy makers; which tools do we have for extension service/farmers → leaflets, radio programs?
- Need to see what REGs have and what they need and how we can help them
- Technical engagement → invite ourselves and invite others (networking)
- Upgraded university curricula
- Consumers’ associations
- Primary/secondary schools
- WHO, FAO, etc.

- Lessons learned from SFFF1 (situational analysis report): provide clear details on formats for outputs, so people do not have to prepare two reports
Administrative arrangements

Outline

1. Institutional agreements: Where appropriate, Collaborative Research Agreements (CRA) will be established with partners responsible for budget administration using the ILRI CRA template. The CRA provides the general legal framework for the collaboration, and specific budgets can be updated or added as amendments (‘schedules’) to the CRA. The CRA is suitable for collaborations with a significant budget, multiple people involved in multiple activities and only recommendable if everyone is comfortable managing the funds through the institution. In some cases, it may make more sense to fund smaller activities directly from ILRI such as consultancy agreements.

Provisional working agreements with project partners:

<table>
<thead>
<tr>
<th>Country</th>
<th>Partner</th>
<th>ILRI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kenya</td>
<td>UoN</td>
<td>ILRI</td>
</tr>
<tr>
<td>Tanzania</td>
<td>SUA</td>
<td>CRA</td>
</tr>
<tr>
<td>Ethiopia</td>
<td>AAU-FVM</td>
<td>ILRI</td>
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<tr>
<td>Uganda</td>
<td>MAK</td>
<td>ILRI</td>
</tr>
<tr>
<td>Mali</td>
<td>CSRS</td>
<td>CRA</td>
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<tr>
<td>Germany</td>
<td>BfR</td>
<td>ILRI</td>
</tr>
<tr>
<td></td>
<td>FUB</td>
<td>ILRI</td>
</tr>
</tbody>
</table>

Consultancy contract to be set up

CRA for joint appointment of project coordinator signed

2. Budget management: Funds to be transferred to each partner responsible for an activity budget will be detailed in the Consultancy contract, the CRA or its amendments. The budget is based on a preliminary estimate that was developed during the proposal preparation. Planned expenditures will need to be based on detailed work plans and budgets developed annually or by activity, and agreed with ILRI. Expenditures will be justified according to agreed deliverables. Care will be taken to carefully define the deliverables and how they will be evaluated to minimize misunderstandings.

3. Protocol management: A system of cascading protocols will be used to document project activities. The protocols, similar to student proposals, will give details about the justification, objectives, methods, analytical approach, staff, timing, budget etc. for each activity, and need to be approved by the project management at ILRI before undertaking the activity. The protocol is meant to be a living document and will be updated to record what actually happened during the implementation of the activity (e.g., sample size, attrition, survey dates, etc), problems encountered (staff changes, relations with respondents, poorly designed questions, etc). ILRI will provide templates.

4. Funding: Funds will be disbursed by wire transfer to a project bank account as an advance each year once the deliverables for the preceding period have been successfully achieved.

5. Reporting: Each partner will submit a progress report every six months in August and an annual report in January every year. ILRI will provide the report structure to follow. ILRI will be responsible for consolidating the reports into a single progress report to submit to BMZ by the end of February each year.
6. Students: Partners supervising students will be responsible for ensuring that students are registered, tuition and stipends are paid, and access is provided to computing facilities. Students will submit a short quarterly progress reports to ILRI via their project supervisor.

7. Data and publications: The cooperation agreements include provisions for Intellectual Property Rights, including noting that any data generated by the project are the property of ILRI to ensure that they will be made public domain after project staff have had the opportunity to generate publications. All publications must acknowledge the support of BMZ. All draft publications are to be reviewed by a project scientific review committee, and an authorship policy will be agreed.

8. Field allowances: Each country will propose per diem rates consistent with standard rates practiced by the lead institution, as long as those rates reasonably reflect actual costs.

Reporting format

Name of organisation

Reporting Period

Project Coordinator (Leading Scientist) and Project Scientists
Name the leading scientist stating his/her full address, telephone no., fax and e-mail. Give the names of the principal staff members participating in the project (addresses not necessary).

Collaborating Institutions and Staff
State the full names of the institutions and main staff members and students involved in the project, and the nature of their involvement. State any changes in personnel.

Activities completed
Briefly describe the activities carried out during the reporting period, including any un-planned activities. Describe the progress against milestones and the deliverables obtained.

Achievements and constraints
Summarize the results of ongoing activities; highlight important achievements, methodological breakthroughs, experiences and major constraints of project implementation, un-expected side-effects of project activities; report on the use of results by other scientists, projects and beneficiaries; report on feedback from users concerning interim results and implications for national agricultural research systems and agricultural research organizations. If objectives, outputs or indicators could not be achieved, please state reasons.

Conclusions for the following reporting period
State whether outputs are still relevant and achievable, point out issues which require adjustments to the work-plan, including comments from in-house peer reviews and/or validation of progress by peers. Draw conclusions for the further implementation of the project.

Publications, papers and reports
List under this item all relevant documents which constitute new products of the present project since the last progress report. Please send copies of the publications, papers and reports to SFFF2 project coordinator to be forwarded to BMZ/GIZ.
Annex 1: Agenda

The inception workshop for the project Safe Food Fair Food: From capacity building to implementation

Objectives: The workshop will focus on team-building, sharing information about partner institutes, planning activities, and administrative arrangements.

Participants
Please prepare a small introduction (2-5 slides, 10 minutes) on your partner institution (session 2).

Day 1: Thursday, April 12, 2012 (room 721, ILRI campus Nairobi)

<table>
<thead>
<tr>
<th>Time</th>
<th>Activity</th>
<th>Presenter/ facilitator</th>
</tr>
</thead>
<tbody>
<tr>
<td>8:30 – 9:00</td>
<td>Check-in and coffee/tea</td>
<td>Diana Oduor, Kristina Roesel</td>
</tr>
<tr>
<td>9:00 – 9:10</td>
<td>Opening</td>
<td>Jimmy Smith, ILRI-DG</td>
</tr>
<tr>
<td>9:10 – 9:15</td>
<td>Objectives and schedule</td>
<td>Delia Grace</td>
</tr>
<tr>
<td>9:15 – 9:20</td>
<td>Introduction participants</td>
<td></td>
</tr>
<tr>
<td>9:20 – 10:20</td>
<td>Session 1: Project rationale, approach, context</td>
<td>Tom Randolph, Delia Grace</td>
</tr>
<tr>
<td>10:20 – 10:30</td>
<td>Coffee/tea break</td>
<td></td>
</tr>
<tr>
<td>10:30 – 11:30</td>
<td>Safe Food, Fair Food 1</td>
<td>Kohei Makita, Kristina Roesel</td>
</tr>
<tr>
<td></td>
<td>Safe Food, Fair Food 2</td>
<td></td>
</tr>
<tr>
<td>11:30 – 13:00</td>
<td>Session 2: Partnership analysis</td>
<td>Bassirou Bonfoh, Peter-Henning Clausen, Francis Ejobi, Alexandra Fetsch, Reinhard Fries, Saskia Hendrickx, Erastus Kang'ethe, Lusato Kunwijila, Kohei Makita, Helena Matusse, Kwaku Tano-Debrah, Girma Zewde</td>
</tr>
<tr>
<td>13:00 – 14:00</td>
<td>Lunch break</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Session 3: Detailed planning year 1</td>
<td></td>
</tr>
<tr>
<td>14:00 – 14:15</td>
<td>Metagenomics</td>
<td>Francesca Stomeo/ Mark Wamalwa</td>
</tr>
<tr>
<td>14:15 – 15:30</td>
<td>Rapid integrated assessment</td>
<td>Delia Grace</td>
</tr>
<tr>
<td>15:30 – 15:45</td>
<td>Coffee/tea break</td>
<td></td>
</tr>
<tr>
<td>15:45 – 16:30</td>
<td>Action research</td>
<td>Delia Grace</td>
</tr>
<tr>
<td></td>
<td>End of workshop day 1 and transfer to Segesese Guesthouse</td>
<td></td>
</tr>
<tr>
<td>18:00 – 21:00</td>
<td>Pick up from guesthouse for Dinner at Fogo Gauch</td>
<td></td>
</tr>
</tbody>
</table>

Day 2: Friday, April 13, 2012 (room no. 721, ILRI campus Nairobi)

<table>
<thead>
<tr>
<th>Time</th>
<th>Activity</th>
<th>Presenter/ facilitator</th>
</tr>
</thead>
<tbody>
<tr>
<td>8:30 – 9:00</td>
<td>Check-in, per diems, coffee/tea</td>
<td>Diana Oduor</td>
</tr>
<tr>
<td></td>
<td>Session 3 cont’d: Detailed Planning year 1</td>
<td></td>
</tr>
<tr>
<td>9:00 – 10:30</td>
<td>RECs Communication</td>
<td>Delia Grace, Tezira Lore, Kristina Roesel</td>
</tr>
<tr>
<td>10:30 – 11:00</td>
<td>Friday Morning Coffee at ILRI</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Session 4: Administrative arrangements</td>
<td></td>
</tr>
<tr>
<td>11:00 – 12:30</td>
<td>CRA, Reporting to ILRI/BMZ, financial arrangements, student support, intellectual property, publication agreements</td>
<td>Kohei Makita</td>
</tr>
<tr>
<td>12:30 – 13:00</td>
<td>Institutional Research Ethics Committee (IREC), Institutional Animal Care and Use Committee (IACUC)</td>
<td>Delia Grace</td>
</tr>
<tr>
<td>13:00 – 14:00</td>
<td>Lunch break</td>
<td></td>
</tr>
<tr>
<td>14:00 – 15:00</td>
<td>A tour of ILRI Nairobi facilities and Biosciences eastern and central Africa (BecA) Hub</td>
<td>Timothy Kingori</td>
</tr>
<tr>
<td>15:00 – 15:15</td>
<td>Coffee/tea break</td>
<td>Delia Grace</td>
</tr>
<tr>
<td>15:15 – 16:30</td>
<td>Review year 1 Action Plan Closing session</td>
<td></td>
</tr>
<tr>
<td>16:30 – 18:00</td>
<td>Reception at ILRI Enkare Club</td>
<td>All participants and other invites from ILRI</td>
</tr>
<tr>
<td></td>
<td>End of workshop day 2 and transfer to Segesese Guesthouse</td>
<td></td>
</tr>
</tbody>
</table>
## Annex 2: List of participants

Safe Food Fair Food: From capacity building to implementation  
12-13 April 2012 at ILRI campus Nairobi (room no. 721)

<table>
<thead>
<tr>
<th>Last name</th>
<th>First name</th>
<th>Affiliation</th>
<th>Email</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bonfoh</td>
<td>Bassirou</td>
<td>Centre Suisse de Recherches Scientifiques en Côte d'Ivoire (CSRS)</td>
<td><a href="mailto:bassirou.bonfoh@csrs.ci">bassirou.bonfoh@csrs.ci</a></td>
</tr>
<tr>
<td>Clausen</td>
<td>Peter-Henning</td>
<td>Free University of Berlin (FUB), Germany</td>
<td><a href="mailto:peter-henning.clausen@fu-berlin.de">peter-henning.clausen@fu-berlin.de</a></td>
</tr>
<tr>
<td>Ejobi</td>
<td>Francis</td>
<td>Makerere University (MU), Uganda</td>
<td><a href="mailto:ejobifrancis@gmail.com">ejobifrancis@gmail.com</a></td>
</tr>
<tr>
<td>Fetsch</td>
<td>Alexandra</td>
<td>Federal Institute for Risk Assessment (BfR), Germany</td>
<td><a href="mailto:Alexandra.fetsch@bfr.bund.de">Alexandra.fetsch@bfr.bund.de</a></td>
</tr>
<tr>
<td>Fries</td>
<td>Reinhard</td>
<td>Free University of Berlin (FUB), Germany</td>
<td><a href="mailto:Reinhard@friesconsult.info">Reinhard@friesconsult.info</a>; <a href="mailto:fries.reinhard@vetmed.fu-berlin.de">fries.reinhard@vetmed.fu-berlin.de</a></td>
</tr>
<tr>
<td>Grace</td>
<td>Delia</td>
<td>International Livestock Research Institute (ILRI)</td>
<td><a href="mailto:d.grace@cgiar.org">d.grace@cgiar.org</a></td>
</tr>
<tr>
<td>Hendrickx</td>
<td>Saskia</td>
<td>International Livestock Research Institute (ILRI)</td>
<td><a href="mailto:s.hendrickx@cgiar.org">s.hendrickx@cgiar.org</a></td>
</tr>
<tr>
<td>Kang’ethe</td>
<td>Erastus</td>
<td>University of Nairobi (UoN), Kenya</td>
<td><a href="mailto:mburiajudith@gmail.com">mburiajudith@gmail.com</a></td>
</tr>
<tr>
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<td>Lusato</td>
<td>Sokoine University of Agriculture (SUA), Tanzania</td>
<td><a href="mailto:kurwijila_2000@yahoo.com">kurwijila_2000@yahoo.com</a></td>
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<tr>
<td>Makita</td>
<td>Kohei</td>
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<td><a href="mailto:kmakita@rakuno.ac.jp">kmakita@rakuno.ac.jp</a></td>
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<td>Matusse</td>
<td>Helena</td>
<td>Ministry of Agriculture, Mozambique (Direcção de Ciências Animais)</td>
<td><a href="mailto:helena.matusse@gmail.com">helena.matusse@gmail.com</a></td>
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<td>Roesel</td>
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</tr>
<tr>
<td>Stomeo</td>
<td>Francesca</td>
<td>Biosciences eastern and central Africa (BecA)-Hub, Kenya</td>
<td><a href="mailto:f.stomeo@cgiar.org">f.stomeo@cgiar.org</a></td>
</tr>
<tr>
<td>Tano-Debrah</td>
<td>Kwaku</td>
<td>University of Ghana (UoG)</td>
<td><a href="mailto:ktanode@ug.edu.gh">ktanode@ug.edu.gh</a></td>
</tr>
<tr>
<td>Wamalwa</td>
<td>Mark</td>
<td>Biosciences eastern and central Africa (BecA)-Hub, Kenya</td>
<td><a href="mailto:m.wamalwa@cgiar.org">m.wamalwa@cgiar.org</a></td>
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<td><a href="mailto:girmazewde@gmail.com">girmazewde@gmail.com</a></td>
</tr>
</tbody>
</table>

*WorldFish were not able to attend but are a partner in the CGIAR Research Program on Livestock and Fish as well as the project.*
Annex 3: CGIAR background information and context of the CGIAR Research Programs and the Safe Food, Fair Food project

**CGIAR** is a strategic alliance that unites organizations involved in agricultural research for sustainable development with the donors that fund such work. These donors include governments of developing and industrialized countries, foundations and international and regional organizations.

The work they support is carried out by the 15 members of the CGIAR Consortium of international agricultural research centres, in close collaboration with hundreds of partner organizations, including national and regional agricultural research institutes, civil society organizations, academia and the private sector. CGIAR is sponsored by the Food and Agriculture Organization of the United Nations (FAO), the International Fund for Agricultural Development (IFAD), the United Nations Development Programme (UNDP) and the World Bank.

**CGIAR’s vision**
To reduce poverty and hunger, improve human health and nutrition and enhance ecosystem resilience through high-quality international agricultural research, partnership and leadership.

**Strategic objectives**
- Reducing rural poverty
- Improving food security
- Improving nutrition and health
- Sustainably managing natural resources

In 2008, CGIAR embarked on a change process to improve the engagement between all stakeholders in international agricultural research for development - donors, researchers and beneficiaries - and to refocus the efforts of the centres on major global development challenges. A key objective was to integrate the work of the centres and their partners, avoiding fragmentation and duplication of effort.

The CGIAR Consortium was established in April 2010. It is based at the Agropolis campus in Montpellier, France. The purpose of the Consortium is to provide leadership to the CGIAR system and coordinate activities among the CGIAR centres and other partners, within the framework of the Strategic Reference Framework (SRF), to enable them to enhance their individual and collective contribution to the achievement of the CGIAR’s vision.

The **CGIAR Fund** was established in January 2010 and is based in Washington DC, USA. It aims to harmonize the efforts of donors to contribute to agricultural research for development, increase the funding available by reducing or eliminating duplication of effort among the centres and promote greater financial stability.
The 15 CGIAR centres
- Africa Rice
- Bioversity International
- International Center for Tropical Agriculture (CIAT)
- Center for International Forestry Research (CIFOR)
- International Center for Agricultural Research in the Dry Areas (ICARDA)
- International Crops Research Institute for the Semi-Arid Tropics (ICRISAT)
- International Food Policy Research Institute (IFPRI)
- International Institute of Tropical Agriculture (IITA)
- International Livestock Research Institute (ILRI)
- International Maize and Wheat Improvement Center (CIMMYT)
- International Potato Center (CIP)
- International Rice Research Institute (IRRI)
- International Water Management Institute (IWMI)
- World Agroforestry Centre
- WorldFish

The CGIAR Research Programs

CGIAR Research Programs are multi-center, multi-partner initiatives built on three core principles: impact on the CGIAR's four system-level objectives; making the most of the centers' strengths; and strong and effective partnerships.

The following research programmes have now been approved:


ILRI leads the CGIAR Research Program on Livestock and Fish and one of four components of the CGIAR Research Program on Agriculture for Nutrition and Health (which is led by the International Food Policy Research Institute).
CGIAR Research Program on Livestock & Fish

The purpose of the program is to increase the productivity of small-scale livestock and fish farming in selected developing countries to enhance the nutrition and increase the incomes of poor and hungry households.

The Strategy: Focus locally, impact globally.

Why focus on farm animals? Because Livestock + fish = big opportunities for the poor!

- High demand: increasing demand for animal-source foods in developing countries is a big opportunity for smallholders, who can raise their incomes by meeting that demand.

<table>
<thead>
<tr>
<th></th>
<th>Developed countries</th>
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<tbody>
<tr>
<td>Milk</td>
<td>0.2</td>
<td>1.8</td>
</tr>
<tr>
<td>Meat</td>
<td>0.5</td>
<td>1.7</td>
</tr>
<tr>
<td>Fish</td>
<td>0.0</td>
<td>0.6</td>
</tr>
<tr>
<td>Cereals</td>
<td>0.3</td>
<td>0.4</td>
</tr>
</tbody>
</table>

Projected increase in demand for animal foods to 2020, % per year (Delgado et al, 1999)

- Highly nutritious: animal-source foods are critical for malnourished people, especially women and children.
- Highest value:
  - Meat, milk and fish are generally the highest value agricultural products globally.
  - Nearly 1 billion (70%) of the world’s 1.4 billion extremely poor people depend on livestock.
  - Two-thirds of the world’s livestock keepers are rural women.
  - Over 100 million landless people keep livestock.
  - 400 million people in Africa and South Asia depend on fish for most of their animal protein.

What is new about this research program?

- Takes a ‘value chain’ approach; research is focused on value chains to generate big and measurable impacts with:
  - R&D investments and efforts catalysed
  - Both development and private agencies incorporated in productive partnerships.
  - Scientific expertise and resources shared across platforms.

- Select most promising value chains to work with
  - Pigs in Vietnam and Uganda
  - Goats and sheep in Mali and Ethiopia
  - Aquaculture in Uganda (? Egypt?)
  - Dairying in Tanzania and India
  - Dual-purpose cattle in Nicaragua

- Embeds impact pathways directly in the research
To help these value chains perform better, the program will identify address key constraints and opportunities, improve institutional arrangements and capacities, and support the establishment of enabling pro-poor policy and institutional environments.

**Expected impacts over the next 10 years**

- **Dairy and pigs for better incomes**
  High potential: we can double productivity and livestock incomes of 100,000 households in each country (50,000 in Central America)

- **Aquaculture for better nutrition**
  High potential: we can increase the supply of fish by 615,000 tonnes per year in Egypt; 11,000 tonnes per year in Uganda (doubling supplies there).

- **Goats and sheep for better livelihoods**
  Medium potential: we can increase national meat production by 5,000 tonnes per year; doubling livestock incomes in 70,000 households in each country.

For more information visit [http://livestockfish.cgiar.org](http://livestockfish.cgiar.org)

CGIAR Partners: ICARDA, WorldFish, ILRI, CIAT
CGIAR Research Program on Agriculture for Improved Nutrition and Health

The vision:
Accelerate the progress in improving agriculture, nutrition, and health for effective and sustainable development.

Despite the recognition of the positive and negative impacts of agriculture, links between the agriculture, nutrition, and health communities remain weak and much is still unknown about the different types of trade-offs associated with various agricultural development decisions and their potential impacts on nutrition and health.

The strategy: Work where agriculture intersects with health and nutrition
The research program will work at the interface of the agriculture, health, and nutrition sectors to provide evidence-based research and enhance agriculture’s capacity to catalyze nutrition and health benefits while reducing health risks.

What is new about this research program?
- The systematic view of how agriculture, health, and nutrition interact globally, nationally, and locally and address gaps in the knowledge of these relationships
- It will develop a strong body of evidence based on rigorous research to help decision makers choose options and evaluate trade-offs
- It will foster effective approaches and partnerships to improve nutrition and health across sectoral boundaries while factoring in cross-cutting issues such as gender, institutions, and the environment.
- The program is organized around five components encompassing nutritional solutions, health and disease, and delivery systems and policy:

Integration of Agriculture, Health, and Nutrition

5. Policy- and decisionmaking
4. Integrated programs
Nutrition
\[\text{Maximize nutritional benefits}\]
Health
\[\text{Minimize health risks}\]
Agriculture
Behavior and social change
1. Nutrition-sensitive value chains
2. Biofortification
3. Control of agriculture-associated diseases
Gender, capacity, institutions, technologies, environment
1. Nutrition-sensitive value chains
Goal: Increase demand for and access to nutritious foods by identifying and using leverage points to improve nutrition through the value chain.

2. Biofortification
Goal: Develop and release new varieties of carefully selected staple crops with enhanced bioavailable nutrients to improve nutrition for millions of people.

3. Control of agriculture-associated diseases
Goal: Control and mitigate agriculture-associated diseases (including food- and water-borne, zoonotic, and occupational-related diseases) in order to enhance environmental sustainability, reduce poverty, increase food security, and contribute to the health of poor communities.

4. Integrated agriculture, health, and nutrition programs
Goal: Accelerate progress in improving health and nutrition by exploiting the synergies between agriculture, health, and nutrition in development programs implemented at the community level.

5. Policy- and decision making across agriculture, health, and nutrition
Goal: Synthesize and prioritize knowledge, evidence, and approaches to support better cross-sectoral policymaking and decision making.

For more information see: http://www.ifpri.org/book-8125/ourwork/division/agriculture improved-nutrition-and-health-crp4

and http://mahider.ilri.org/bitstream/handle/10568/10628/IssueBrief_10.pdf?sequence=6

Safe foods in informal markets (Safe Food, Fair Food)
Led by ILRI and funded by BMZ/GIZ

Why animal source foods matter
- In poor countries, livestock and fish feed billions. In East Africa, for example, livestock provide poor people with one tenth of their energy and one quarter of their protein needs. Fish account for more than half of the animal protein intake for the 400 million poorest people in Africa and South Asia.
- Meat, milk, eggs and fish are important sources of the micro-nutrients and high quality proteins essential for growth and important for child growth and cognitive function as well as better pregnancy outcomes for women and reduced illness for all.
- Production and marketing of livestock and fish earns money for farmers, traders and sellers, many of them women.
- On the other hand, excessive amounts of animal source food have been linked to heart disease and production. Animal source foods are also important sources of biological and chemical hazards that cause sickness and death.

Why informal markets matter
Most of the meat, milk eggs, and fish produced in developing countries is sold in traditional, domestic markets, lacking modern infrastructure and escaping effective food safety regulation and inspection. By ‘informal markets’ we mean:
- Markets where many actors are not licensed and do not pay tax (e.g. street foods, backyard poultry, pastoralist systems)
- Markets where traditional processing, products and retail prices predominate (e.g. wet markets, milk hawking system, artisanal cheese production)
- Markets which escape effective health and safety regulation (most domestic food markets in developing countries).

Informal markets – a history of neglect and unbalanced interest
Much attention has been paid to the role of informal markets in maintaining and transmitting diseases but little to their role in supporting livelihoods and nutrition. Undoubtedly hazards exist in informal milk and meat including pathogens such as diarrhoea-causing *Escherichia coli*, *Salmonella* and tapeworm cysts; SARS came from, and avian influenza is maintained in the wet markets of South East Asia. Concerns over informal food has been heightened by the landmark Global Burden of Disease studies (WHO) which found that diarrhoea is among the most common causes of sickness and death in poor countries. Most of this is caused by contaminated food and water, and around half is linked to animal pathogens (zoonoses) or animal source foods.

Food borne illness and animal disease and animal disease is of growing concern to consumers and policymakers alike. Consumers respond to scares by stopping or reducing purchases with knock-on effects on smallholder production and wet market retail. Policy makers often respond to health risk by favouring industrialisation and reducing smallholder access to markets. These changes are often based on fear not facts. Without evidence of the risk to human health posed by informally marketed foods or the best way to manage risks while retaining benefits, the food eaten in poor countries is neither safe nor fair.

What we have learned about food safety in informal markets
The International Livestock Research Institute (ILRI) and partners have been conducting research on food in informal markets over the last ten years. Some of our findings from past research with implications for future include:
Informal markets are highly preferred

Food safety matters to poor consumers

Hazards don’t always matter, but risks do: our studies from many markets in many countries show that food sold in the informal sector often contains hazards. Research suggests that as value chains become longer, more complex, transport larger, more diversely-sourced volumes of food, and place larger distances between producers and consumers, so hazards increase. However, a series of studies showed that risk to human health is not necessarily high. Stochastic models based on data from a number of sites in East Africa showed that milk had many hazards but less risk (mainly because of consumer practices in boiling). In Nigeria, however, there was a clear link between consumption of beef and increased illness. Risk cannot be assumed for informal markets: evidence is required.

Perception is a poor guide for risk managers, assessment is needed to understand the source of risk: Studies in East Africa, North-East India and Vietnam came to the surprising conclusion that food sold in formal markets, though commonly perceived to be safer, may have lower compliance with standards than informally marketed food. This emphasises that food safety policy should be based on evidence and not perception and failure to do this may be prejudicial to the poor who dominate and rely upon informal value chains.

Draconian food safety policy makes things worse; stakeholders often blame insufficient legislation or lack of strict implementation for poor food safety and the current ‘command and control’ method is less likely to work. Paradoxically, legislation can even increase the level of risk, and farmers who had experienced harassment by authorities or who believed urban farming to be illegal used significantly fewer risk managing practices.

Values and cultures are more important drivers of food safety than pathogens: studies found butcher’s association with more women had better food safety practices, better quality of meat, and there was less gastro-intestinal illness amongst the people who consumed it. A study in West Africa found that Fulani believed that milk was in its nature pure, it could not be a source of disease. They boiled milk they sold to customers but not the milk they drank themselves.

Food safety is a fixable problem: interventions that involve training, simple technologies (such as a use of wide-necked vessels for milk which are easier to clean), social approval, tests for food safety which can be applied by traders and consumers (e.g. lactodensimeters to check for added water) and certification of trained vendors. Economic assessment showed that recognising the informal sector and giving training and certification led to benefits worth several million USD per annum, thus showing the high potential impacts of better ways to manage food safety.

What is being done by ILRI about food safety in informal markets?

- The Safe Food, Fair Food project on building capacity for food safety in informal markets finished in 2011. This generated numerous products including 25 proof of concept studies, briefs, situational analyses of food safety in five countries and training manuals.
- In South East Asia an Ecohealth research project is looking at risks in poultry slaughter houses as well as food as a risk factor for zoonotic diseases causing diarrhoea in children and abortion in women.
- ILRI has started new research on mycotoxins in the feed-dairy chain in Kenya and pig value chain in Vietnam.

Safe Food, Fair Food 2
Work over the last decade confirms our hypothesis that food safety is an important and growing constraint to smallholder value chains because of its multiple burdens on human health,
livestock production and product marketing. The new CGIAR Research Program on Agriculture for Enhanced Nutrition and Health is an opportunity to bring new resources to tackle this problem. Some of the strategies that guide this program will be:

- **Prioritisation and systems understanding**: we need to continue developing rapid, appropriate methodologies that can identify the food safety and zoonoses constraints to value chains and systems and the benefits of addressing these (Comparative Risk Assessment).

- **Risk and socio-economic assessment**: Integrated measurement of multiple health and economic benefits and burdens is needed to raise awareness of the relative importance of problems and improve resource allocation; social and economic determinants affect behaviour of both consumers and value chain actors, and so are important drivers of food safety. Assessment of incentives at the individual, group and whole-chain levels can lead to better risk communication and management.

- **Risk management**: Risk factor assessment can give insights (often contradicting conventional wisdom) into food safety management and increase the effectiveness and equity of packages of interventions. As substantial part of the risk associated with informally marketed food can be reduced by relatively cheap and simple interventions which are compatible with the incentives faced by specific individuals of coalitions within value chains.

- **Cross-cutting**: current regulations and inspections based on the presence of hazards rather than health risks to consumers are ineffective at assuring food safety and prejudicial to smallholder farmers and informal value chains. Risk-based approaches can lead to more effective and equitable food safety management. Integrated, multi-disciplinary or trans-disciplinary approaches to food safety can give added insights, increase ownership, improve effectiveness and generate efficiencies.

For more information visit [http://safefoodfairfood.wordpress.com](http://safefoodfairfood.wordpress.com) and [http://mahider.ilri.org/bitstream/handle/10568/10626/IssueBrief_11.pdf?sequence=2](http://mahider.ilri.org/bitstream/handle/10568/10626/IssueBrief_11.pdf?sequence=2)
Annex 4: Training at Rakuno Gakuen University

Japan Student Service Organization (JASSO)
2012 Rakuno Gakuen University Tropical Veterinary Public Health (TVPH) Program

Announcement of 2 weeks training course

Participatory food safety risk assessment for informal value chains

3rd - 12nd September, 2012
At Rakuno Gakuen University, Ebetsu, Japan
Introduction
In almost all developing country cities and towns, majority of foods are sold in informal markets. Worldwide, 2billions of diarrhea cases occur for all age groups and 1.5million children under five die each year due to this illness, of which majority of the cause is zoonotic pathogens. Food borne diseases include other zoonotic diseases such as brucellosis and *Mycobacterium bovis* tuberculosis and the total disease burden is much greater than the single figure of diarrheal diseases. The producers selling to informal markets are usually poor small-holders and thus improvement of food safety along informal value chain will have significant positive impacts not only on public health but also on poverty alleviation because of the expected enhanced market access by such farmers and traders. Participatory risk assessment is a powerful tool to understand the risks of informally-marketed foods and to plan effective intervention strategies.

Course contents
This course uses a good mixture of teaching and hands-on styles. After learning overview of food borne disease issues, the course will move into useful participatory methods and risk analysis. In risk assessment, participants will learn about stochastic processes, how to build and run a risk model and how to conduct sensitivity analysis in @Risk or ModelRisk software.

Week 1 (3-7 September: 5 days)
- Food safety issues in developing countries and risk analysis: 3rd September
- Participatory methods (taught and practice): 3rd September
- Probabilistic sampling (taught): 4th September
- Bayesian inference and Monte Carlo simulation (taught): 4th September
- Stochastic process (taught and practice): 5-6th September
- Dose-response relationship (taught and practice): 7th September

Week 2 (10-12 September: 3 days)
- Building a value chain model (taught and practice): 10th September
- Building and run a risk model (taught and practice): 11th September
- Sensitivity analysis (taught and practice): 12th September
- Problems beyond risk assessment (taught): 12th September

Who should attend?
The targeted audience is expected to be Postgraduate students working on animal- source food safety risk analysis in informal value chains in developing countries under the International Livestock Research Institute (ILRI) programs. However, this course is open for other students with some statistical background as well as animal and public health professionals (maximum 15 attendants in total for practical exercise). The course will be provided in English and university level of English fluency is required.
The speaker
Dr. Kohei Makita is the Associate Professor of Veterinary Epidemiology in RGU and at the same time Joint Appoint Scientist in ILRI, Kenya. Dr. Makita is an expert of stochastic food safety risk analysis in developing countries and also is familiar with other applied epidemiological analyses of zoonotic and animal diseases. His group uses One Health approach in order to respond wide range of problems concerning multiple sectors both in developed and developing countries.

Course fee
For ILRI and RGU undergraduate students, this course is provided for free. For other participants, JPY 2000 per day will be charged.

Venue
RGU Computer Room (The room number is yet to be confirmed)
Rakuno Gakuen University, 582 Bunkyodai Midorimachi, Ebetsu, 069-8501, Japan

Accommodation
For ILRI students, accommodation will be booked by Extension Center, RGU. The accommodation fee will be invoiced to each student. JASSO scholarship which can be handed to ILRI students at RGU can cover the cost.

Transportation
ILRI students will be picked up at the Chitose International Airport.

Course booking
Registration information must be filled and faxed (+81-(0)11-388-4761) or sent by email to Ms. Akiko Shinohara: shino@rakuno.ac.jp by 31st July 2012.

For more information
About the course: Dr Kohei Makita: kmakita@rakuno.ac.jp; tel +81-(0)11-388-4761
Miscellaneous: Ms Akiko Shinohara: shino@rakuno.ac.jp; tel +81-(0)11-388-4131
Registration information

2012 TVPH course: Participatory food safety risk assessment for informal value chains

*Registration is limited to 15 participants for practical exercise
*Deadline is 31 July 2012

Name:  
Sex:  
Title:  
Company/Organization:  
Address:  
Phone:  
Email:  

For a partial attendee, please tick the program you would like to attend;

☐ Food safety issues in developing countries and risk analysis: 3rd September
☐ Participatory methods (taught and practice) : 3rd September
☐ Probabilistic sampling (taught) : 4th September
☐ Bayesian inference and Monte Carlo simulation (taught) : 4th September
☐ Stochastic process (taught and practice) : 5-6th September
☐ Dose-response relationship (taught and practice) : 7th September
☐ Building a value chain model (taught and practice) : 10th September
☐ Building and run a risk model (taught and practice) : 11th September
☐ Sensitivity analysis (taught and practice) : 12th September
☐ Problems beyond risk assessment (taught) : 12th September

* Course fee will be collected at the course for partial attendees.

- Registration options
  - Fax to: +81-(0)11-388-4761
  - Email attaching PDF to: shino@rakuno.ac.jp
Annex 5: ILRI publications and other communication products

Compiled by Tezira Lore, Communication Specialist at ILRI

ILRI communication products
http://www.ilri.org/publications

Mahider online repository & Google Books
- ILRI Publications Series
- Journal articles
- Books & book chapters
- Conference presentations & posters
- Video and film
- Audio and podcasts

Web 2.0 knowledge sharing tools
- Websites, blogs & wikis
- Flickr
- Twitter
- Facebook
- Delicious
- Yammer

Safe Food, Fair Food 1
- Website
- Research outputs in Mahider
- Livestock Markets Digest blog
Annex 6: Group email contacts

**SFFF2 partners**
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a.omore@cgiar.org; a.djikeng@cgiar.org; j.karugia@cgiar.org; m.beveridge@cgiar.org;
m.dickson@cgiar.org; m.fadiga@cgiar.org; a.fall@cgiar.org; f.onyango@cgiar.org;
f.stomeo@cgiar.org; m.wamalwa@cgiar.org; t.randolph@cgiar.org; s.moyo@cgiar.org

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kilangokaiza@yahoo.com; mahundieabc@yahoo.com; yahahuhr@gmail.com;
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aaay02@yahoo.fr; jaga007joy@yahoo.com; controlodn@yahoo.com.br; redheeb@web.de;
nenene.qekwana@gmail.com; joguttu@unisa.ac.za; shashi.ramrajh@kzndae.gov.za;
kamenu@gmail.com; marisa.spengler@gmx.de; molefe.mabunda@gmail.com;
kbomfeh@gmail.com; bassirou.bonfoh@csrs.ci; andre.markemann@uni-hohenheim.de;
cheryl.mccrindle@gmail.com; mburiajudith@gmail.com; kurwijila_2000@yahoo.com;
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d.grace@cgiar.org; a.omore@cgiar.org; scostard@epixanalytics.com; kmakita@rakuno.ac.jp;
s.hendrickx@cgiar.org