# Protecting consumer health in cities

RIU

**Validated RNRRS Output.**

New knowledge about the policy linkages between food safety, poverty and environmental pollution has had a major impact in guaranteeing consumer health India. A key factor in the formula for success was the creation of a food-safety forum involving representatives from government, the private sector, and non-government and community organizations. They worked together on policy advocacy and developed and tested food-safety strategies. Environmental pollution can lead to contamination of fresh produce, endangering the health and livelihoods of people living in and around cities. The valuable institutional lessons, policy perspectives and processes that emerged from the Indian experience can help to promote pro-poor food-safety policy in other countries and contexts.

Project Ref: **CPH06:**
Topic: **6. Promoting Success: Partnerships, Policy & Empowerment**
Lead Organisation: **University of Sussex, UK**
Source: **Crop Post Harvest Programme**

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**Document Contents:**



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**Research into Use**
NR International
Park House
Bradbourne Lane
Aylesford
Kent
ME20 6SN
UK

**Geographical regions included:**

**India, Zambia,**

**Target Audiences for this content:**

**Processors, Traders, Consumers,**

## Description

***CPH06***

***A. Description of the research output(s)***

*1. Working title of output or cluster of outputs.*

**Mobilizing policy systems and stakeholder networks to improve food safety for the urban and peri-urban poor.**

*2. Name of relevant RNRRS Programme(s) commissioning supporting research and also indicate other funding sources, if applicable.*

**Crop Post Harvest Programme**

*3. Provide relevant R numbers (and/or programme development/dissemination reference numbers covering supporting research) along with the institutional partners (with individual contact persons (if appropriate)) involved in the project activities. As with the question above, this is primarily to allow for the legacy of the RNRRS to be acknowledged during the RIUP activities.*

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*4. Describe the RNRRS output or cluster of outputs being proposed and when was it produced?* ***(max. 400 words)****. This requires a clear and concise description of the output(s) and the problem the output(s) aimed to address. Please incorporate and highlight (in bold) key words that would/could be used to select your output when held in a database.*

CPHP R7530 (completed in March 2003) studied urban and **peri-urban vegetable production** carried out by **smallholder farmers,** and associated marketing systems in India, with a focus on enhancing food chain integrity and **quality assurance** mechanisms. Empirical evidence from the study clearly showed that **environmental pollution** can adversely impact the health and livelihoods of urban and peri-urban inhabitants through contamination of fresh produce. Technical and **institutional mechanisms** for addressing this issue were assessed.

Recommendations for public sector and market-mediated approaches to **food quality** assurance were made. The potential impact of new quality assurance mechanisms on the livelihoods of horticultural system stakeholders was assessed, as were perceptions concerning **food safety** and specific pathways were investigated for promoting awareness of hazards, and of safer food preparation practices.

**The project used a systems perspective to analyse existing formal and informal policy processes that could impact on the provision of safe fresh food produce for the poor, and recommended new types of stakeholder coalitions dealing with food safety.**

The study was a pointer to the inefficacy of current approaches towards ensuring safety of food to the consumer. Various interventions must be made from cleaner production sites, to transport and marketing (both wholesale and retail) and consumer practices. Current policy relates to food standards, environmental standards, industrial siting, peri-urban agriculture and consumer rights separately and is inadequate to tackle the issue comprehensively.

**A food safety forum was proposed which will include participants from government, private sector, non-government and community based organizations.. The forum will have a major role in policy advocacy and the explicit purpose of developing and testing food safety strategies in Indian cities. Through the activities of the forum the project will ensure that food safety becomes recognised as an integral part of the food chain in India, and that mechanisms exist to engage with policy to address existing and emerging food safety concerns. Having identified enhanced consumer awareness as a key driver for boosting demand for food safety, the proposed follow up to outputs will help enable poor peri-urban farmers to equip themselves to produce safe food and thus cope with the shift in consumer preferences.**

The quality control structure and the food safety regulatory system that was present during R7530 are now undergoing considerable change with the implementation of the new Food Safety (Standards) Act. This shift reflects a key recommendation in R7530, which is, unification of the food safety regulatory system to remove contradictions in different pieces of legislations and control orders. However, the new food safety regulatory mechanism focuses on processed and packaged food products; it does not spell out the mechanisms required to achieve many of its objectives, it does not address contamination linked with environmental pollution in fresh produce, and there are no complementary mechanisms to support farmers in safe production practices. Most significantly, it does not emphasise pro-poor food safety policies and programmes. These are all issues that the

proposed outputs would address.

*5. What is the type of output(s) being described here?*
*Please tick one or more of the following options.*

| ***Product*** | ***Technology*** | ***Service*** | ***Process or Methodology*** | ***Policy*** | ***Other Please specify*** |
|---|---|---|---|---|---|
| | *X* | *X* | *X* | *X* | |

*6. What is the main commodity (ies) upon which the output(s) focussed? Could this output be applied to other commodities, if so, please comment*

**Vegetables. Yes it can be applicable to other food and fodder crops (The outputs can also be applied to processed and packaged food whose quality will be affected by contaminated inputs, for instance, packaged rice and wheat, wheat flour etc and products made from these)**

*7. What production system(s) does/could the output(s) focus upon?*
*Please tick one or more of the following options. Leave blank if not applicable*

| ***Semi-Arid*** | ***High potential*** | ***Hillsides*** | ***Forest-Agriculture*** | ***Peri-urban*** | ***Land water*** | ***Tropical moist forest*** | ***Cross-cutting*** |
|---|---|---|---|---|---|---|---|
| | | | | *X* | | | |

*8. What farming system(s) does the output(s) focus upon?*
*Please tick one or more of the following options (see Annex B for definitions).*
*Leave blank if not applicable*

| ***Smallholder rainfed humid*** | ***Irrigated*** | ***Wetland rice based*** | ***Smallholder rainfed highland*** | ***Smallholder rainfed dry/cold*** | ***Dualistic*** | ***Coastal artisanal fishing*** |
|---|---|---|---|---|---|---|
| | | | | | | |

*9. How could value be added to the output or additional constraints faced by poor people addressed by clustering this output with research outputs from other sources (RNRRS and non RNRRS)?* ***(max. 300 words)****.*

**There is likely to be much potential for clustering, to add value to the outputs.**

**Examples as follows:**

**Clustering with outputs that support small scale farmers in carrying out low external input or organic farming practices (and the marketing of produce) will reinforce one important channel of engagement for integrated policies and programmes to improve food safety for the poor. Organic agriculture is increasingly being promoted in urban and peri-urban areas, but it important to be able to provide a**

**balanced assessment of the opportunities and threats associated with it for a particular set of environmental, social, and economic conditions. Despite the many advantages of organic systems, food safety is not necessarily improved, however there are opportunities to address this through the proposed work.**

**Studies concerned with strategies for planning and management of the peri-urban interface could add value to the work. The long term success of food safety strategies for cities is greatly influenced by the need to improved planning for the highly dynamic peri-urban interface. In particular there is a need to recognize the particular constraints faced by the poor in producing food in these areas and the link between environmental degradation and food quality and safety. This of course has implications for many planning decisions in areas such as industrial siting, pollution control and waste management.**

**Activities aimed at improving market access for the poor, and participatory mechanisms for improved market coordination could also add value to the outputs. These would assist with developing a important array of market interventions to support food safety strategies in Indian cities.**

**There is obvious potential to enhance outputs by linking with initiatives aimed at addressing the safety of street foods.**

*Please specify what other outputs your output(s) could be clustered. At this point you should make reference to the circulated list of RNRRS outputs for which proformas are currently being prepared.*

The project can be possibly clustered with

**R7493, R8270, R8433, R8272 (Keith Tomlins, Andy Graffham) Food safety - street foods.**

**R8438, R8297 (Project leader - ICIPE) Development of private sector service providers**

**R8491 (Project leader - Michael Mattingly, Development Planning Unit, UCL, UK)**
**Planning and development policy and method in the PUI**

**R8084, Hubli Dharwad (Project leader – Robert brook, SAFA, University of Wales)**
**Participatory action planning and implementation, Self-help groups and community action**

**R8365, Calcutta (Project leader – Stuart Bunting, University of Essex)**
**Participatory action planning and implementation**

**R7668 (Project leader – Chris Mees, MRAG Ltd) Strategy for the management of agrochemicals**

**R8422 (Project leader - Nsemwa, L T Hmr & Dr Dick Lyimo) Market information tools**

**R7502/R6306 (Richard Lamboll) Decision tools for institutional change in public and private sectors.**

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# Validation

***B. Validation of the research output(s)***

*10. **How** were the output(s) validated and **who** validated them?*

*Please provide brief description of method(s) used and consider application, replication, adaptation and/or adoption in the context of any partner organisation and user groups involved. In addressing the "who" component detail which group(s) did the validation e.g. end users, intermediary organisation, government department, aid organisation, private company etc... This section should also be used to detail, if applicable, to which social group, gender, income category the validation was applied and any increases in productivity observed during validation **(max. 500 words)**.*

**The results were validated in relation to potential impact on poor producers, consumers and market intermediaries. However as the end of R7130 was planned to be the start of the process of mobilizing policy and pathways to improved food safety in Indian cities, much of the validation related to the potential and willingness of key stakeholder groups to become effectively engaged in this proposed follow up process.**

**An extensive series of consultations and workshops (supported by technical reports, policy briefing notes and fact sheets) were carried out, involving stakeholders relevant to the food systems in urban and peri-urban areas to receive feedback on the proposed plans to effect positive change in terms of the movement towards a more pro-poor food safety policy and increase in awareness of the link between environmental pollution and food safety. Stakeholder included a wide range of government representatives (from fields including agriculture, environment, urban planning, health, consumer affairs); industrial associations, producers and traders organisations, consumer organisations, aid agencies (DFID India, The world Bank etc); scientific and policy research institutes, environmental NGOs. Some of these workshops were held with peri-urban farming communities (as outlined elsewhere in the proforma) with a emphasis on practices to improve food safety resulting in the adoption of changes in vegetable washing practices.**

**The workshops discussed action plans to engage with formal food safety decision making bodies and also a series of complementary mechanisms involving stakeholders that are not currently at the centre of food safety policy making and improvements - such as poor consumers, producers, tradesmen and polluters. The validation was supported by parliamentary questions and the governments response to them in instigating follow up activities. A considerable amount of media attention (national and local tv, radio, and newspapers) created further extensive dialogue on the issue, which combined with active involvement of consumer groups, helped to create a policy environment that was conducive to change.**

**The scientific results were validated through academic presentations and peer review publications.**

*11. **Where and when** have the output(s) been validated?*

*Please indicate the places(s) and country(ies), any particular social group targeted and also indicate in which*

*production system and farming system, using the options provided in questions 7 and 8 respectively, above* ***(max 300 words)****.*

**The outputs have been validated only in India so far in relation to peri-urban production systems and small holder farmers (both with and without irrigation). Through R8160 there is in effect an ongoing process of validation both in India and Zambia.**

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## Current Situation

***C. Current situation***

*12.* ***How and by whom*** *are the outputs currently being used? Please give a brief description* ***(max. 250 words****).*

**The outputs of R7530 and R8160 have contributed to generation of new knowledge in the national debate in India regarding the interface between agriculture and environmental pollution. The project outputs have been used by various stakeholders. Specific instances include:**

- **The outputs are being used by non-government policy advocacy organisations like Toxics Links to inform the national food safety discussions, including the discussions on the drafting of the Food Safety and Standards Act of 2006. The outputs of R7530 have also been used by Toxics Link to file a Public Interest Litigation concerning the right to safe food in the Supreme Court of India.**
- **Stakeholder networks established at the completion of R7530 have been extended in R8160 (an ongoing project looking at the contamination of irrrigation water and implications for food safety) and the outputs are being used to intervene in the food safety regulatory system. Consultations have been held with industry organisations like the Confederation of Indian Industry and consumer organisations like VOICE, who are participants in the food safety law drafting process, to inform and introduce the safety issues of fresh produce as well as their interface with environmental pollution.**
- **Members of the Indian Parliament raised the issues highlighted in the project outputs to bring them to the attention of the Government. The outputs have served as key information points for the recently concluded debate on food safety policy in the Indian Parliament.**
- **Acknowledging the implications of the project findings the Government of India established a Committee of Experts to further study the issues and recommend measures. The Committee will be submitting its report to the Government.**
- **The Indian national media has given wide coverage to the project findings and the amelioration measures recommended.**
- **Workshops with some women in some rural communities and urban slum communities have included successful training on appropriate vegetable washing techniques to remove contamination**.

*13. **Where** are the outputs currently being used? As with Question 11 please indicate place(s) and countries where the outputs are being used **(max. 250 words).***

**The outputs are currently being used in India, to inform ongoing discussions regarding the framing of the new food safety regulatory system and relevant standards-setting processes, and to highlight the policy linkages between food safety, poverty and environmental pollution.**

**The institutional lessons, policy perspectives and processes that emerged from the RNRRS project are also relevant for working towards pro-poor food safety policy in other contexts. The outputs are already being used to some extent in Zambia through R8160.**

*14. What is the scale of current use? Indicating how quickly use was established and whether usage is still spreading **(max 250 words).***

**The outputs were taken up rapidly by stakeholder groups after completion of R7530. While parliamentarians raised questions in the Indian Parliament, the media brought the issues to public notice and civil society organisations approached the judiciary. The outputs of R7530 as well as R8160 have served as useful information points for the various committees established by the Government to study the food safety regulatory system with an aim to restructure it. The Government set up an expert committee to study the issue of contamination of fresh produce as a result of the project findings. The Joint Parliamentary Committee deliberating on standards for food and beverages also echoed the project recommendations. With the proposed establishment of the Food Safety Authority and the advisory/ scientific committees under it, the outputs have the potential of serving as important intervention points.**

**However, valuable usage is when widespread benefits to the poor start to emerge. In our opinion this will require an additional concerted effort as catalyst and facilitator for change. The team has previously proposed a specific strategy for this, but there were no funds to support this activity at the completion of R7130. In the three years since completion of R7130 we have been able to make limited progress, whilst refining our strategy for a possible larger initiative.**

*15. In your experience what programmes, platforms, policy, institutional structures exist that have assisted with the promotion and/or adoption of the output(s) proposed here and in terms of capacity strengthening what do you see as the key facts of success? **(max 350 words).***

**The food safety regulatory framework has been in transition since the completion of R7530, with restructuring of the regulatory agencies and the laws governing food safety. This presents an exciting opportunity to influence the process of policy change through the outputs of R7530.**

**The quality control structure and the food safety regulatory system is undergoing a structural change with the implementation of the new Food Safety (Standards) Act, and also provides the opportunity to review other parameters such as food standards. This shift also reflects a key recommendation in R7530, which is, unification of the food safety regulatory system to remove contradictions in different pieces of legislations and control orders. However, the new food safety regulatory mechanism emphasises processed and packaged food products for enabling international trade, rather than addressing the**

**linkages between environmental pollution, crop contamination and livelihood of the poor. R7530 outputs can effectively address this policy gap. R8160 has already built the links and networks with stakeholders to fill in the policy gap by adding the issue of contaminated irrigation water to the previous knowledge on impacts of air pollution on food safety.**

**R7530 identified enhanced consumer awareness as a key driver for boosting demand for food safety. This increased awareness is also introducing a shift in the marketing channels of fresh produce and preference of consumers who are ready to pay a premium for branded 'safe' food or better quality food. This has resulted in large business houses integrating production and supply by tying up with large and medium farmers. The outputs can provide a valuable opportunity for engagement with this process so that livelihoods of the small farmers are not threatened.**

**The new Food Safety (Standards) Act also envisages revision of existing food standards, which are much more lenient than international standards. There is however no relevant standards for irrigation water of agricultural inputs. Thus the question of standards is an emergent issue which the proposed project can effectively addressed based on the work already done. Both R7530 and R8160 raise the question of appropriate standards to safeguard the health and livelihood of the poor. International organisations like the Food and Agriculture Organisation of the United Nations and World Health Organisation are being consulted regarding these issues.**

**Field surveys and participatory studies from R7530 and R8160 also show that low income producer groups have a strong interest in food safety when made aware of hazards, but currently have limited means of expressing these to influence policy. Such interest is also expressed by street vegetable vendors and hawkers.**

**The project has also reviewed a range of initiatives associated with the improving the livelihoods of people in peri-urban areas (e.g governmental and non-governmental schemes directed at childhood health and nutrition), and have identified those that might be successful partners in operationalising a new pro-poor food safety strategy. The emphasis is on engaging with existing organisations in new partnerships and new ways of working, so that food safety becomes an integral part of ventures to improve the livelihoods of poor people and strategies for pro-poor growth.**

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## Current Promotion

### *D. Current promotion/uptake pathways*

*16. **Where** is promotion currently taking place? Please indicate for each country specified detail what promotion is taking place, by whom and indicate the scale of current promotion **(max 200 words).***

**Promotion of the outputs is currently taking place amongst Indian farmers, the food processing industry, policy makers and civil society organisations. The key pathways of promotion include circulation of newsletters and briefing papers, publication of papers in peer reviewed journals, conducting seminars,**

**focus group discussions and workshops. All the project partners and many associates of R7530, have been involved in promotion activities. A public interest litigation has also been filed by Toxics Link, a non-government organisation in New Delhi and also a project partner, in the Supreme Court of India seeking directions to the Government of India for taking measures to minimize contamination of food.**

**The current foci of dissemination are the linkages between food safety, agricultural practices, livelihood opportunities and environmental pollution. This is particularly relevant as the food safety regulation framework is being revised in India. A unified food safety authority aided by several scientific committees is being envisaged to replace the currently fragmented regulatory system where unconnected agencies regulate quality for different types of food and often work at cross-purposes.**

**Promotion is also taking place to some extent in Zambia through R8160 in ongoing discussions on the links between environmental pollution and food safety relating to peri-urban agriculture in Lusaka and Kafue.**

*17. What are the current barriers preventing or slowing the adoption of the output(s)? Cover here institutional issues, those relating to policy, marketing, infrastructure, social exclusion etc.* ***(max 200 words)****.*

**There are multiple factors which act as barriers to the uptake of the knowledge generated by R 7530, but many can be addressed and the team has proposed specific activities for doing so. The types of barriers include:**

**(1) Inadequate awareness amongst stakeholders and policymakers on the interlinkages between food safety and environmental pollution.**
**(2) Lack of a supportive policy environment for addressing the interface between policy areas which impact on the production of safe food in urban and peri-urban areas,**
***(3)*** **Policy bias towards packaged food and food processing industries over small farmers and fresh produce**
**(4) Lack of effective mechanisms to act as channels of information exchange between producers and consumers.**
**(5) Lack of mechanisms for assimilation of emerging technical information and lessons from peri-urban poor into policy and programme planning. This is particularly important in this highly dynamic social and environmental context.**
**(6) The existing and proposed food safety regulatory system has inadequate representation of various stakeholders**
**(7) Technological barriers to treatment of effluents and low-cost monitoring of pollution levels by the poor**

*18. What changes are needed to remove/reduce these barriers to adoption? This section could be used to identify perceived capacity related issues* ***(max 200 words).***

**Removing barriers to inducing policy change (and to making these changes operational) is a process which requires the building of concensus around a new perspective on food safety, recognition of the drivers for change, agreeing a coordinated set of interventions,**

**and acting at the most conducive 'moments'. This should be complemented by set of specific activities to provide illustrations of the potential benefits for pro-poor food safety policy. Broadly, the components which can effectively help remove or reduce barriers to assimilate the outputs of R7530 will include: establishing a platform where various stakeholders can engage with the proposed Food Safety Authority to enhance its capacity and monitor its progress; network building amongst the various stakeholder groups in order to make food safety policymaking more representative and pro-poor; Information dissemination and awareness generation regarding the impacts of environmental pollution on the poor, technical and institutional measures for improving food safety and nature of partnerships and networks appropriate for mitigating environmental threats to the livelihood of the poor; building the capability of each stakeholder group to catalyse changes in their respective areas of interest and involvement ; working with the poor to enable them to cope with the shifts required to work in a new policy framework and to gain most benefit from it.**

*19. What lessons have you learnt about the best ways to get the outputs used by the largest number of poor people?* ***(max 300 words).***

**The outputs of the R7530 were disseminated amongst a large number of stakeholders. Workshops were conducted amongst the peri-urban poor, particularly women, and also amongst policymakers and other stakeholders. While awareness of contamination of crops can induce behavioural changes like washing of vegetables, introducing larger changes in agricultural and marketing practices for most part are beyond control of the poor and require broader policy changes. Ensuring production of safe food will require a shift in the food safety policy as well as in the agriculture-environment framework for other changes in the extension services, marketing mechanisms, categorization of vegetables according to quality and controlling the sources of pollution. Engaging in a vigorous policy advocacy can create a wide range awareness which creates an environment where new information generated can be assimilated. An active involvement of the poor communities (and other policy movers including the farmers' associations, local self-government units (*gram panchayats*, municipal councils etc), traders' associations and the food industry) can not only help increasing the effectiveness of such advocacy, but also generate a sense of ownership amongst the communities. Since the outputs related to two peri-urban areas in India, translating them to relate with practices across the country can be achieved only through larger policy change.**

**Another pathway of maximizing the effectiveness of the outputs involve institutionalizing the knowledge through international organisations like FAO and WHO which act as advisory organisations to the national government.**

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## Impacts On Poverty

***E. Impacts on poverty to date***

*21. Where have impact studies on poverty in relation to this output or cluster of outputs taken place? This should include any formal poverty impact studies (and it is appreciated that these will not be commonplace) and any less formal studies including any poverty mapping-type or monitoring work which allow for some analysis on impact on poverty to be made. Details of any cost-benefit analyses may also be detailed at this point. Please list studies here.*

***There have been no studies.***

*21. Based on the evidence in the studies listed above, for each country detail how the poor have benefited from the application and/or adoption of the output(s)* ***(max. 500 words):***

- *What positive impacts on livelihoods have been recorded and over what time period have these impacts been observed? These impacts should be recorded against the capital assets (human, social, natural, physical and, financial) of the livelihoods framework;*
- *For whom i.e. which type of person (gender, poverty group (see glossary for definitions) has there been a positive impact;*
- *Indicate the number of people who have realised a positive impact on their livelihood;*
- *Using whatever appropriate indicator was used detail what was the average percentage increase recorded*

***There have been no studies, these would be relevant after the introduction of a new pro-poor food safety strategy***

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## Environmental Impact

***H. Environmental impact***

*24. What are the direct and indirect environmental benefits related to the output(s) and their outcome(s)?* ***(max 300 words)***

**R 7530 clearly showed the linkages between environmental pollution and crop quality, and highlighted good agricultural practices and post harvest handling to minimize environmental and human health risks. The outputs addressed the issues of air pollution control, zoning of industrial areas, impacts of increasing urbanization and transportation. The need for upgrading existing standards to align them with international standards (Codex, EU etc) was also highlighted. However, appropriate standards for fresh produce in line with international standards can be effective only with changes introduced in the related policy arenas, thus directly and indirectly reducing impacts of pollution and levels of pollution. Adopting measures to reduce the impact of heavy metals and other pollutants on crops would imply the overall reduction of adverse impacts from such sources. R8160 also raises the crucial issue of surface water pollution along with quality control of irrigation water, and other environmental pollutants would be included in the proposed food safety strategies. Management or**

**control of such pollution at source will have multi-directional societal benefits**.

*25. Are there any adverse environmental impacts related to the output(s) and their outcome(s)?* ***(max 100 words)***

No

*26. Do the outputs increase the capacity of poor people to cope with the effects of climate change, reduce the risks of natural disasters and increase their resilience?* ***(max 200 words)***

**The project many indirectly help to increase resilience of the poor, but helping to develop institutional arrangements for effective engagement between the poor and other stakeholders concerned with environmental management and adaptation to adverse impacts of environmental pollution.**

**There may also be important lessons to learn in terms of coping with climate change from the way that poor people are already adapting to the impacts of local pollution on agriculture and livelihoods in peri-urban areas. This extends to identifying appropriate measures to support initiatives to address local environmental pollution issues which again may provide useful input to climate change adaptation strategies.**