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Zoonoses and Food Hygiene News, published four times a year, provides a medium for disseminating technical information on matters related to zoonoses and food hygiene generated in the world, particularly in Nepal. The editors welcome submissions on these topics with appropriate illustrations and references. The views and opinions expressed in the News are those of the authors.

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URBAN ECOSYSTEM HEALTH PROJECT PHASE-II IN WARD 19 AND 20 KMC: (Contd...)

Dr. Durga Datt Joshi, Director, NZFHRC & Project Coordinator

Objectives, Research Questions and Methods:

Objective 1: Disseminate and share the findings of research from the first-phase project with different stakeholders, from communities, through policymakers for planning and implementation of environmental and health programs and policies.

Research Questions

- ◆ Who are key stakeholder groups that should be targeted for dissemination of research results?
- ◆ What forms of dissemination and materials are appropriate for each of them?
- ◆ What are their interests, responsibilities, power & negotiation positions?
- ◆ What capacity building needs are necessary for community groups and researchers to lobby and influence decision-makers?
- ◆ What strategies can be put in place to influence policies and regulations to improve human health in the wards through better management of ecosystem?

Methods:

Both sections below are interrelated and many activities will be carried out in parallel or feed one another.

Lobbying & policy influence strategies:

A social and stakeholder analysis workshop will be planned with assistance of facilitator supported by IDRC within the first quarter of project. This is a practical workshop where the research team and invited community and government collaborators will develop overall plan to lobby and use research results to influence decision makers and policies/ regulations. The methodology used will be based on the Stakeholder/ Social Information System approach (SSIS) in Social Analysis System (SAS) workshop. This workshop will be guided by the research questions presented above.

Dissemination of Research Findings & Results:

Based on the plans resulting from the workshop above, different publication & dissemination materials will be planned. These may include posters, short reports for specific elements (like Health and Slaughtering and Meat Inspection, Rabies Control, Meat Marketing, Water Quality Protection, Garbage Collection, etc...), presentations at workshops, or other. Different materials will be prepared and pre-tested in local languages for community groups (such as butchers, dog owners, etc...), the general public (in community meetings, schools, local clubs) and decision-makers (Ward, KMC and central government). Communication expert and drawing artists will be hired to design different materials. Workshops and related activities described below will also be carried out.

Planned Activities:

Following are the main activities for this first objective. They will be reviewed and refined following SSIS of SAS workshop.

- ◆ Produce and pre-test simple Newari and Nepali language publications containing research findings on ecosystem health and recommendation to improve them.
- ◆ Assist the stakeholders' groups to use information in their community action and awareness programs
- ◆ Help key community stakeholder groups to organize sharing meetings with KMC body and other NGOs to enable them to respond to the community needs
- ◆ Share research finding with concerned Ward and KMC personnel
- ◆ Distribute publications to NGOs and schools working in the wards for their use
- ◆ Assist Local Youth Clubs to build their programs based on the findings
- ◆ Monitor the implementation of Animal Slaughtering and Meat Inspection Act/Regulations and highlight discrepancies that authorities and community stakeholder groups can act to remedy
- ◆ Share the act/regulation widely with concerned stakeholders and discuss ways to facilitate its proper application
- ◆ Organize a advocacy strategy development workshop with poor renter population, wage laborers and sweepers
- ◆ Publish and share advocacy materials widely
- ◆ Lobby concern authority for formulation of appropriate policies/regulation in favor of urban poor

Objective 2: Support and strengthen on-going community actions, KMC initiatives and advocacy efforts that emerged from the first-phase project, including monitoring and evaluation of these works.

Research Questions:

Based on the research results from Phase I and the monitoring of action plans, key research questions related to this objective are:

- ◆ What are the major health concerns in the Wards for the different cast and socio-economic groups?
- ◆ How relevant and effective are the community plans that are being implemented for addressing these health concerns?
- ◆ How relevant and effective are Ward and KMC plans that are being implemented for addressing these health concerns?
- ◆ How can these plans be supported to become (or lead to) sustainable disease prevention measures?

Methods:

The Research Wards:

Ward 19 and 20 of Kathmandu Metropolitan City. According to the population census 2048, literacy rate of this ward is 40%. According to the population census 1991, the total population in this ward is 5939 of which male 2956 and female 2983 in ward 19. There are 1132 households in this ward 19 and 1137 in ward 20. The inhabitant's rate is 5.3 in each household.

The methodology for providing support and strengthening community actions will be based on:

- First review meeting with team members and representatives of community groups about the progress made on the short-term, medium-term and long-term action plans made by the different stakeholders at the end of the three years urban ecosystem health project. Discuss and record the problems faced during implementation of action plans in the wards.
- Research team meeting(s) to plan, schedule and implement strategy of support to community groups. The strategy may include:
 - Lobby Ward and KMC authorities in supporting community groups in implementing collective actions that emerged from previous project
 - Provide necessary information to community groups for approaching KMC authorities for public services through community meetings
 - On the spot guidance to community groups for project implementation and networking
 - Run non-formal education (REFLECT) classes to raise awareness among illiterate and semi-illiterate groups
 - Provide training to local club members on research methods, action planning, Social mobilization, Institutional strengthening, Participatory monitoring and evaluation
 - Provide grants support to stakeholders initiatives (up to 10 grants, 5 per ward, will be funded. See budget notes), based on approval by research team of workplans prepared by community groups. Half of these grants will be targeted to the poorest sectors of the ward population (see objective 3).
- Follow-up group by group review and planning meetings with the representatives of each stakeholder group about their action plans implementation and capacity-building needs and resources to carry them out.

- Monitor progress of implementation of various activities (see sections on M&E) and adjust support strategy as necessary
- Monitor health data to assess changes. Health conditions and health risk indicators will be monitored through the project. Specifically, measuring the prevalence of parasitic infestation among humans and dogs, water quality of selected sources, and analyse general health conditions and perceptions of population (health surveys) at two different times over the duration of the project to assess the effects of the activities being implemented. This health monitoring will also include to strengthen the capacity of existing two ward health clinics in blood, urine, stool and water testing techniques. A 15-days training course to the clinics 4 staff on laboratory diagnosis will be done to make them able to perform tests on routine basis. The research team will monitor quality control on selected tests on a periodic basis and provide feedback to clinic staff on their techniques.

Variables & Indicators will Include:

• **Basic Household Data :**

Ward 19 - 1132 household with total population 5976, male 2976 & female 3002

Ward 20 - 1137 household with total population 5427, male 2745 & female 2682

• **Socio-Economic Indicators**

Pattern of household, Ethnic groups, Religion, Local social institutions, Public health , hygiene and sanitation, Sexwise literacy rate, Household income

• **Public Health Indicators (health perceptions, common illnesses, health seeking and access to health services, and hygiene habits)**

Child immunization, Malnourished children, Maternal mortality, Infant mortality, Incidence of diarrhea, Incidence of Acute respiratory infection, Prevalence of intestinal parasitic infestation, Household with and with out toilets, Household with tap supplied drinking water, Veg and non vegetarian people, Type of meat consumption, Knowledge of zoonotic diseases, Knowledge of waterborne diseases, Slaughtering practices

Data Collection:

Epidemiologist, statistician and project co-ordinator will design the survey questionnaire and other tools. Social scientist will give training to interviewers i.e. community researchers two from each ward, who will be responsible on taking interview from each randomly selected household heads by means of checklist and questionnaire. Thus obtained information will be set in "epi-info version 6" for data analysis.

Parasitic Infestation Levels:

For monitoring the parasitic infestation particularly zoonotic important parasites transmitted through dogs among the community people including different stakeholder population the following method will be used:

Dissemination of the stool test results: There will be a community meeting in each ward organized in collaboration with the local health clinics for the prevention of control of parasitic disease in human population. Anti-helminthes will be distributed free of cost to the people that tested positive. The results of this testing will be part of the health indicators to compare with previous test results.

Slaughtering & Food Inspection Monitoring:

The monitoring of present animal slaughtering practices in both wards will be carried out with the butchers to find out the changes and improvements made after the previous project. Meetings with the butchers will be held to analyze present problems, and discuss issues related to space regulations in new Slaughterhouse Meat Act, garbage collection and disposal, water supply, hygiene and sanitation and transportation regulations of meat to the market.

Observation and testing will be done of meat quality status in animals slaughtered for meat at slaughtering places of both wards and meat kept for sale at meat shops in relation to zoonotic important parasites. About 20 slaughtered animals will be selected randomly and examined at slaughtering places. There are altogether 20 permanent meat shops in both ward 19 and 20, so all the meats shops will be monitored for zoonotic important parasites. The examination will be focused on detection of *Echinococcus/hydatid* cysts and *T.solium* and *T.saginata* cysts in the meat.

To learn about the butchers' practice feeding raw offals and cysts to dogs surrounding the slaughterhouse and meat shops, about 50 dog stool samples will be collected and examined under the microscope for detection of parasites (*Echinococcus*). The obtained result will help to plan interventions in future by organizing special training to the butchers and meat sellers through a social mobilization and participatory urban appraisal (PUA) approach.

Rabies Prevention and Control:

Last, rabies prevention and control programme organized in 35 wards of KMC showed that there are 60895 total dogs population in KMC out of which Pet dogs 31,665, community dogs 12,179 and street dogs 17,051. Among them vaccination was focused among the pet dogs. In ward 19 estimated pet dogs is 485 while in ward 20, 569 pet dogs.

To organize a dog rabies vaccination camp at ward 19 and 20, pre- vaccination arrangements particularly public awareness programme will be organized by means of radio, local & national newspapers and mobile loud speakers etc. and carry out the programme as similar to the last year programme. All the dogs brought during the vaccination programme will be vaccinated.

Water Quality and Disease Prevention:

- A total 140 water samples will be collected and tested in the first year of the project. Samples will be taken during the dry and rainy seasons. All samples will be tested with the H₂S test in duplicate, along with negative controls by the NZFHRC laboratory. For each sample an H₂S data sheet including household identification number will be filled up at same time. Other information in the data sheet includes. This information will be used to correlate test results with sanitary condition surrounding water source and/or sample.
- In 10% of samples selected at random, tests will also be carried out by NZFHRC for the presence of total coliforms and *E.coli* using coliplate and colistrip tests kits and following the manufacturer's procedures. These tests will be used to confirm the correlation of H₂S positive tests and fecal contamination of the water samples.

- The results of the survey will be used to plan community and household interventions, including training/mass awareness for ward members on water quality, health and treatment of water at the traditional stone taps, youth clubs, water truck or households.
- During this testing phase, the local clinics will be strengthened for water testing so that in future people can test their water in their own clinic as a sustainable approach at local level. For this, a one week water quality management and testing training with clinic personnel and other interested community groups will be done. This will include a one day training on general public health issues in the wards, communicable diseases, zoonoses prevention and control measures related to drinking water and sanitation.

Data Handling and Analysis:

An overall database for the project will be designed, based on the specific objectives of the project and refining the overall methodology. This will be done as the data collection tools for the project are finalized and tested. The following steps will be followed:

- For each specific objective and corresponding planned testing, surveys and/or M&E data collection, lists will be prepared for all the variables and indicators that are planned to be collected in each case;
- For each group of data variables, questions that research team wants to answer with an analysis of these variables and data will be defined;
- These sets of variables, indicators and questions will be reviewed by the epidemiologist, statistician, & the team as a whole to identify gaps in variables & indicators to be gathered, define the attributes for each, the statistical analyses that need to be performed, and input & output data needs;
- Based on this review, the database will be built and statistical handling planned;
- Data collection tools and strategies (for example, sample size, timing and/or frequency of collection) may need to be refined after the first iteration.

Objective 3: Generate in-depth understanding and possible actions to address problems of poverty and powerlessness of urban poor especially, unorganized wage laborers, and women sweepers, in the study Wards and in relation to urban ecosystem health.

Research Questions:

For each stakeholder group (urban wage-laborer, low-cast women sweepers):

- ♦ What are the major health and well-being concerns, priorities and needs of them in both Wards?
- ♦ How are these related to their living and working environments and their access to basic services (health, education, drinking water, housing, sanitation)?
- ♦ What levels of organization, cohesion and communication exist among these stakeholders?
- ♦ What limitations and obstacles they face in their efforts to organize and put forward their demands for improved health and well-being?

Methods:

- ◆ **Social-Ecological Mapping & Participatory Urban Action Research** planning will be carried out with each stakeholder group following the methodology developed and implemented in the previous project.
- ◆ **Community Action Plans & local capacity building** will be carried out following the corresponding strategy described under objective 2 in this proposal.
- ◆ Given the low literacy level in these sectors of the population, **REFLECT Workshops** will be organized and implemented as part of the educational and awareness raising program with these stakeholder groups.

Objective 4: Reflect on and synthesize the conceptual and methodological approaches based on the project experience for wider sharing and dissemination.

Methods:

Transdisciplinarity:

Ensuring transdisciplinarity along execution of project will be key to achieve this objective. See earlier section on methods planned to carry this out.

Knowledge validation, synthesis and dissemination

Learning from previous years experience, following activities are outlined for synthesis, validation and dissemination of the project result:

- Organize project evaluation and synthesis workshops with the stakeholders.
- Identify and document key stages in ecosystem health approach process including its strength and weakness
- Compile a consolidated guideline for future replication
- Share the ecosystem approach guideline with agencies working on urban development issues

Kala-azar and Rabies Outbreak Cases during 2003:

Kala-azar and rabies outbreak cases are published here in table 1 and 2, which were recorded and reported by different news media in Nepal during the year 2003 respectively. Highest number of suspected rabid animal bite in and hydrophobia human is in Kathmandu. This is because of many people come from outside of Kathmandu Valley where there is no rabies vaccine availability.

Table 1: Kala-azar outbreak cases during 2003.

District	Morbidity		Mortality		Total	
	Cases	%	Cases	%	Cases	%
Bhojpur	21	6.12	0	0	21	5.9
Sarlai	63	18.37	4	30.77	67	18.82
Mahottari	25	7.29	2	15.38	27	7.58
Sunsari	126	36.73	6	46.15	132	37.08
Siraha	30	8.75	1	7.69	31	8.71
Morang	55	16.03	0		55	15.45
Dharan	20	5.83	0		20	5.62
Bara	3	0.87	0		3	0.84
	343		13		356	

Table 2: Rabies outbreak cases during 2003.

District	Morbidity		Mortality		Total	
	Cases	%	Cases	%	Cases	%
Kathmandu	15000	87.25	11	25	15011	87.09
Dang	50	0.29	1	2.27	51	0.3
Bara	113	0.66	2	4.55	115	0.67
Chitwan	250	1.45	4	9.09	254	1.47
Rauthat	120	0.7	1	2.27	121	0.7
Dhankuta	11	0.06	1	2.27	12	0.07
Sindhuli	13	0.08	1	2.27	14	0.08
Biratnagar	200	1.16	4	9.09	204	1.18
Udayapur	96	0.56	1	2.27	97	0.56
Parsa	350	2.04	3	6.82	353	2.05
Nepalgunj	200	1.16	2	4.55	202	1.17
Rukum	22	0.13	1	2.27	23	0.13
Panchthar	200	1.16	2	4.55	202	1.17
Bhojpur	108	0.63	3	6.82	111	0.63
Sankuwasbha	7	0.04	1	2.27	8	0.05
Saptari	20	0.12	2	4.55	22	0.13
Butwal	350	2.04	1	2.27	351	2.04
Terhthum	60	0.35	1	2.27	61	0.35
Sindhuli	10	0.06	1	2.27	11	0.06
Sarlahi	12	0.07	1	2.27	13	0.08
Total	17192		44		17236	

News:

1. K.D.M.A. Research Award for the year 2060 (2004)

Please kindly submit your research work paper on allergy for trust award consideration by the end of June 2004 to KDMART office Tahachal, G.P.O. Box 1885, Kathmandu, Nepal, Phone: 4270667 and Fax 4272694. This award was established by Dr. D.D. Joshi in 2049 B.S. on the memory of his wife, the late Mrs. Kaushilya Devi Joshi. The award includes a grant of NRs. 10,001 with certificate.

**From: Zoonoses & Food Hygiene News, NZFHRC
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TO:

Dr/Mr/Ms

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