

**Prevention of Suicidal Behaviours:
Feasibility Demonstration Projects on Community
Interventions for Safer Access to Pesticides**



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Prevention of Suicidal Behaviours: Feasibility Demonstration Projects on Community Interventions for Safer Access to Pesticides

Introduction

The intersectoral global public health initiative on the Impact of Pesticides on Health: Preventing Intentional and Unintentional Deaths from Pesticide Poisoning has been launched several years ago as part of the WHO worldwide initiative for the prevention of suicide (SUPRE), with the overall aim to reduce morbidity and mortality related to pesticide poisoning.

Intentional and unintentional pesticide poisoning is a serious problem in many agricultural communities of low- and middle-income countries, such as China, India, and Sri Lanka. It is estimated that there are 250,000 deaths from pesticide poisoning every year, most of which are intentional, and which account for about one third of all deaths from suicide worldwide. In WHO, the Department of Mental Health and Substance Abuse, the Department of Violence and Injury Prevention and Disability, and the Programme on the Promotion of Chemical Safety all share a common interest and concern in working together with other partners, both within and outside the WHO, to advance this intersectoral global public health initiative.

- Objectives of the initiative comprise the following five components:
- Review and recommend improved pesticide policies;
 - Implement sustainable surveillance of pesticide poisoning;
 - Improve the medical management and mental health care of people with pesticide poisoning;
 - Provide training at various levels;
 - Develop or strengthen community programmes that minimize risks of intentional and unintentional pesticide poisoning.

Regarding the last component, i.e. community programmes, the World Health Organization (WHO) and the International Association for Suicide Prevention (IASP), an NGO in official relations with WHO, have agreed on a project collaboration to conduct jointly activities related to "Best practices on community action for safer access to pesticides".

To this end, a meeting was held in Geneva, Switzerland, from 10-12 May 2006, to identify the current state of knowledge on effective and acceptable community interventions that have significant potential in preventing self-harm by pesticide poisoning. The basic information and recommendations arising from that meeting were summarized in the publication entitled "Safer Access to Pesticides: Community Interventions", 2006.

Objectives

Against this background, the present document reports on a subsequent meeting of experts on Feasibility Demonstration Projects on Community Interventions for Safer Access to Pesticides, convened in Nonthaburi, Thailand, 5-7 December 2007, to select interventions from those that had been identified previously and to prepare protocols to conduct feasibility demonstration projects of these actions.

The expected outcomes of the meeting were protocols for the demonstration of feasibility of community-level interventions for safer access to pesticides and the identification of sites where to conduct those demonstration projects and their principal investigators.

Following the welcome of the meeting participants (Annex 4) by J.M. Bertolote, the chair (B. Mishara) and rapporteur (A. Fleischmann) were elected. The agenda (Annex 3) was approved with the addition of an update of new findings. J.M. Bertolote introduced to the objectives of the meeting, A. Fleischmann presented an overview about the global public health initiative on pesticides and health and the interventions identified during the previous meeting, and B. Mishara and V. Scott informed about experiences and findings from IASP pesticide initiatives.

Relevant information

- The interim conclusions based on data collection during 18 months from the study by Oxford University and Sumithrayo confirm the acceptability of locked boxes in Sri Lanka (90% acceptability among farmers). A final report is expected in early 2008. A future large-scale evaluation with about 10,000 boxes is envisaged.
- In India, the final report of the National Review on Pesticide Suicide, by SNEHA and University of Oxford, has been accomplished. In particular, there is a high rate of pesticide and farmer suicide in four semi-arid states of India where one third of the population lives. A popular author wrote about it in the Indian national newspaper which helps to raise awareness about this issue.
- Intentional poisoning with pesticides is also an issue in Central and South America and in countries of the Caribbean. In Nicaragua and Costa Rica there have been a number of educational programmes with some hints that they show positive effects, although no comparative data have been collected. A WHO workshop was held in Leon, Nicaragua in 2007 and further ones are envisaged in the future (in English speaking countries of the Caribbean and in South America).
- There is an increasing body of evidence that chronic exposure to pesticides may increase impulsivity and suicidal ideation. This should be kept in mind when reviewing different storage options.

- Given the renewed determination of the Chinese Government to improve food safety and decrease its exports of poisonous substances, and continuing concerns about the health affects of pesticides, China's Ministry of Agriculture has recently decided to completely ban the production and export of five category I organophosphate pesticides.

Process

- In order to facilitate the selection of potential interventions for further development, criteria were proposed and each potential developer of a feasibility demonstration project described their projects according to these criteria (see Annex 1).
- The whole group split into working groups around each potential developer of a feasibility demonstration project, to work on protocols. Subsequently, four protocols were presented (see Annex 2), entitled as follows:
 - Sri Lanka: Secure storage of pesticides to reduce suicide.
 - India: Centralized communal storage of pesticides.
 - China: Cooperative purchase and communal distribution of pesticides at the village level.
 - China: Community-wide educational and promotional effort to raise awareness about the health risks associated with pesticide use and to assist in the development of community-specific methods for enhancing safe use, storage and disposal of pesticides.
- The budgets of the proposed projects were estimated roughly as follows:
 - *Sri Lanka*: ~20,000 USD in the first year; ~15,000 USD in the second year.
 - *India*: preliminary assessment ~6-7,000 USD; then ~20,000 USD in the first year; ~15,000 USD in the second year.
 - *China*: preliminary assessment of the "Cooperative purchase and communal distribution" project ~5,000 USD; then each project ~50,000 USD for three years.
- It is recommended that any intervention should be accompanied by psychosocial interventions.

Next steps

- Michael Phillips has indicated that he will proceed as soon as possible to verify the acceptability of the projects by the relevant Chinese government agencies, particularly the Minister of Agriculture, and report on this to the Steering Committee.
- Lakshmi Vijayakumar will do some exploratory work to see in which of the potential places in India the project will be conducted.

- The Steering Committee of the WHO/IASP collaborative project will consider the possibility of immediately funding the studies that do not require any preliminary work. It will also consider funding the exploratory work for the projects in China and India.
- Recommendations for funding will include specific timelines and requirements for the implementation and evaluation of the projects, and the submission of intermediary and final reports on the projects that will be funded.

Annex 1

Criteria for the selection of potential interventions.

	SRI LANKA	INDIA	CHINA	CHINA
Title of the project	"Secure storage"	"Centralized communal storage"	"Cooperative purchase and communal distribution"	"Community-wide educational and promotional effort"
Innovation	Introducing greater community involvement (i.e. monitoring of use of boxes), locked boxes in every active farming family, education, disposal of containers	Totally new to India	Very innovative	Raising awareness in the community is new
Infrastructure	Field workers and trained volunteers, experienced advisory group	a) Tamil Nadu: initiation, b) Kerala: Shreyas (Christian organization), c) Maharashtra: MS Swarninathan (foundation)	In provinces and counties personnel available, identify individuals who are responsible in villages	Women's Federation, local schools, good due to the political system
Support	<i>Public:</i> village support, <i>Government:</i> established links, <i>Industry:</i> yes, <i>Stakeholders (NGO's etc.):</i> networks established	<i>Public:</i> needs working on, <i>Government:</i> National Review has increased interest, support for any initiative reducing pesticide suicides, <i>Industry:</i> needs working on, retailers/ distributors may have reservations, CropLife are interested, <i>Stakeholders (NGOs etc.):</i> good track record	<i>Public:</i> difficult as farmers will not be allowed to keep pesticides in home (control issue), <i>Government:</i> possible bonus within the new policy and current priorities, <i>Industry:</i> resistant because of volume and sales	<i>Public:</i> preferably call it safety which is more sellable than suicide, community involvement, <i>Government:</i> educational campaigns are common, <i>Industry:</i> should not be resistant
Practicalities	Manageable, have already worked in the area	a) Tamil Nadu: questionable, most difficult, nothing there, b) Maharashtra: distance is some issue, best infrastructure, c) Kerala: communist challenges	Ministry of Agriculture needs to buy into the scheme, distances and access are not an issue	China has good practice with campaigns, get local actors involved

	SRI LANKA (ctd.)	INDIA (ctd.)	CHINA (ctd.)	CHINA (ctd.)
Resources	<i>Personnel:</i> already established, advisory group, <i>Economic:</i> costs known	<i>Personnel:</i> no research persons, need to access researchers, trainers, field workers, <i>Economic:</i> good potential from interested agencies	<i>Personnel:</i> identify people in each village, local government could select them, <i>Economic:</i> need incentives for participation, savings from purchasing in bulk	<i>Personnel:</i> develop material, <i>Economic:</i> not a huge cost
Measurability	Outcome: suicide and attempted suicide, disposal of containers, control villages identified, Data collection: not a problem, Process: not a problem	Outcome: feasibility of system, Data collection: not a problem	Outcome: feasibility of system, suicide and attempted suicide, Data collection: challenge, Process: e.g. how much distributed each season	Outcome: suicide, Data collection: challenge, Process: not a problem, e.g. how many hours at school, how many people got in contact with it
Potential for replication	Nationally if accepted by community leaders, other countries can be considered if system can be clearly defined	Very good because of national interest and population	Government will agree if beneficial (controlling quality and sales), population acceptance if money saved	Framework ok, specifics would need to be defined in each community
Potential impact	Three villages will be knowledgeable on safe storage, elders involved	Very good	High risk areas: good, if this works it will effect the class of pesticides, aligns with the new policy on producing	Don't know yet, once feasibility worked out, needs to be measured on a larger scale

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