



**Food and Agriculture  
Organization of  
the United Nations**



**World Health  
Organization**

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**JOINT FAO/WHO ACTIVITIES ON RISK ASSESSMENT OF MICROBIOLOGICAL  
HAZARDS IN FOODS**

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**CALL FOR DATA AND EXPERTS ON FOODBORNE PARASITIC DISEASES**

**Deadline: 31<sup>st</sup> July 2011**

**Introduction**

Foodborne parasitic diseases cause serious problems in different parts of the world and it has been estimated that there are more than 70 species of parasites which can be transmitted through food and water. These differ in life cycles, transmission routes and epidemiological characteristics among other things and this means that members of this group of pathogenic organisms can present unique challenges when it comes to their control.

In December 2010, the 42<sup>nd</sup> Session of the Codex Committee on Food Hygiene (CCFH) agreed to start a new work to elaborate "Guidelines for Control of Specific Zoonotic Parasites in Meat: *Trichinella spiralis* and *Cysticercus bovis*" subject to the approval of the 34<sup>th</sup> Session of the Codex Alimentarius Commission which will be held in July 2011. While these Guidelines are expected to provide advice on how to control these two specific parasites (*Trichinella spiralis* and *Cysticercus bovis*) in meat, CCFH also recognised the necessity to address foodborne parasites in a horizontal manner by developing a general guidance document, which would provide a framework within which specific parasite-commodity combinations could be addressed. In order to further discuss this possible future work, the CCFH requested FAO/WHO to review the available information on foodborne parasites to better assess the global problem associated with them, the commodities involved and the related public health and trade/socio-economic issues and thereby identifying the parasite-commodity groups of greatest concern. In addition the CCFH has requested information on the range of risk management options available to address this issue

There are some important initiatives already underway at the international level which can provide critical information to address the above request such as the work of the Parasitic Diseases Task Force under the WHO Initiative to Estimate the Global Burden of Foodborne Disease, and investigations into options for the control of parasites in commodities such as aquaculture products by the FAO Fisheries Department. There is also ongoing work on parasitic zoonoses including trichinellosis underway in the World Organisation for Animal Health (OIE).

However, as the above request goes beyond the scope of such initiatives, FAO and WHO want to ensure that all available and relevant information and data are at their disposal, and are issuing an international call for data to raise awareness about data needs and invite all interested parties to provide both organizations with any relevant information/data, particularly that which may not be readily available in the public domain.

## CALL FOR DATA

### List of Data and Information requirements

Data and information on the following aspects are requested:

#### 1. Impact of Foodborne Parasitic Diseases

While work is underway at the international level on the parasitic disease burden, the data requested below are important to get an understanding of the level of information that exists at individual country level that could be used to prioritize parasite-commodity combinations of greatest concern.

##### A. Impact on public health

- (i) Does your country have in place an operational surveillance system for foodborne diseases that is capable of identifying outbreaks or endemic disease problems linked to foodborne parasites? If not, are there any other mechanisms in place that would facilitate the identification of diseases linked to foodborne parasites?
- (ii) Based on the information collection systems that exist, can you provide information on the following:
  - a) endemic diseases in your country due to foodborne parasites, including information on the following to the extent possible: implicated parasite; implicated food commodity and its relevant characteristics; proportion of population affected, including any information on special population groups affected; severity of clinical manifestations; dose-response relationship; follow-up actions taken to manage and reduce the problem.
  - b) outbreaks of foodborne parasitic diseases in your country ("confirmed" or "suspected") in the past 5 years, including information on the following to the extent possible: date; implicated parasite; implicated food commodity and its relevant characteristics; number of people affected including any information on special population groups affected; severity of clinical manifestations; dose-response relationship; follow-up actions taken to stop the outbreak and/or prevent new outbreaks of this type.
  - c) where available, please provide any reports or documentation on the parasitic diseases identified above.

##### B. Socio-economic impact

- (i) Apart from illness, details of other impacts of foodborne parasites on your population e.g. reduced worker productivity, reduced commodity yield, effect on income, impact on food security, impact and cost of potential control measures on non health aspects such as production systems, level of commitment to address problems related to foodborne parasites etc.
- (ii) In terms of exported products, has your country experienced the rejection of commodities or any other interference due to parasitic contamination? If so, please provide further details including, if possible, incurred economic costs due to the above.

#### 2. Monitoring and inspection system for foodborne parasites

Does your country have a monitoring/inspection system for foodborne disease-causing parasites in animals and/or in food? If so, please provide details on the following issues:

- a) target species/subspecies of parasites
- b) target animals and/or food
- c) frequency of monitoring/inspection and proportion of affected carcasses/level of the contamination
- d) sampling plan and methodology used, if available

### 3. Control and management of parasite contamination of food and prevention of foodborne parasitic disease

In your country, are any measures to control/manage the risks of foodborne parasitic diseases implemented? If so, please provide details of the measure and target parasite-commodity, its scientific basis and/or efficacy. The examples of such measures include, but are not limited to:

- Specific prevention and control measures taken throughout the food chain
  - Primary production: feed control, on-farm biosecurity, anthelmintic treatment
  - Ante-mortem and Post-mortem inspection of meat
  - Processing: heat treatment, freezing/chilling, irradiation, disinfection
- Legislations and regulations
- Training and consumer education

### 4. Risk assessment / Risk profiles

Has any work on risk assessment or risk profile addressing a foodborne parasite been undertaken in your country? If so, please provide the details and a reference.

### 5. Risk ranking

Please rank the combinations of food commodities and foodborne parasites of concern in your country with reference to the supporting evidence where available (i.e. rank the parasite-commodity combination of greatest concern as 1, the next concern as 2....). If such supporting evidence is not available, please explain the rationale for your ranking. For easy reference, the list of major foodborne parasites is given in the Annex.

It is important to gain a better understanding of the differences in the main parasite-commodity combinations of concern in different parts of the world as well as possible differences in the sources of parasite contamination. Therefore, FAO and WHO are seeking the aforementioned data from all countries and regions.

#### *Example:*

Disease/Infection	Parasite	Common food vehicles	Ranking	Explanation of your ranking in terms of public health and socio-economic aspects
Trichinellosis	<i>Trichinella spiralis</i>	pork meat	1	
Alveolar Echinococcosis	<i>Echinococcus multilocularis</i>	fresh produce	3	
Anisakiasis	<i>Anisakis simplex</i>	various marine fish species	2	
Opisthorchiasis	<i>Opisthorchis viverrini</i>	fresh water fish	4	

### 6. Contact person

Please provide name, title and full contact details of the contact person for follow-up and further details if needed.

#### **Request for relevant information**

FAO and WHO are requesting governments, interested organizations, health care providers, academia, veterinarians, the food industry, consumer groups, laboratories and individuals to submit any available data on the specific areas indicated above. This data may be published or unpublished. Reference should be made to related published studies, where applicable.

### **Confidential and/or unpublished data**

FAO and WHO recognize that some of the information and relevant data which is now required may be unpublished or of a confidential nature. With regard to unpublished information and data, this remains the property of the author for subsequent publication by the owner as original material. Unpublished confidential studies that are submitted will be safeguarded in so far as it is possible to do so without compromising the work of FAO and WHO. Specific issues relating to confidentiality should be discussed directly between the information and data owners and FAO/WHO. For these and other issues please contact FAO and WHO at the contacts provided below.

### **Deadline**

Please submit any relevant information (electronic and/or hard copies - electronic submissions are preferred, either via e-mail (if not too large) or on CD ROM), in any official United Nations language (English, French, Spanish, Arabic, Chinese, Russian), and with title and short description of the content in English if possible, to the addresses below, by **31<sup>st</sup> July 2011**.

## **CALL FOR EXPERTS**

In addition FAO and WHO are currently in the process of identifying experts to participate in future work of FAO and WHO in the area of foodborne parasitic diseases. All applicants should meet the following general criteria:

- Advanced University/College degree in parasitology, microbiology, food technology, food science, epidemiology, public health or related fields
- Experience in food safety/risk analysis related to foodborne parasitic diseases
- At least five years experience in relevant fields
- Scientific publications in peer-reviewed journals, in particular, relevant publications within the most recent ten years
- Good knowledge of the English language, both written and oral
- Leadership or invited participation in national or international scientific bodies, committees, and other expert advisory bodies pertinent to the scope of this work

### **Selection of experts**

FAO and WHO place great value on the technical quality and independence of the participating experts as well as on the transparency of its selection process. Both organizations have developed well-defined procedures for selecting experts that promote the excellence and independence of opinions provided.

Applicants' curriculum vitae will be reviewed on the basis of the criteria listed above by a selection panel consisting of three or more individuals including at least two independent, internationally recognized external experts appointed by FAO or WHO. The highly qualified individuals selected from the applicants will be listed in an expert roster that will be used by FAO and WHO to invite experts to the future work in this area.

In selecting experts FAO and WHO will consider, in addition to scientific and technical excellence, diversity and complementarities of scientific backgrounds, and balanced representation from geographic regions, including developing and developed countries, as well as gender. Selected experts may be required to assist in the preparation of background papers.

### **Appointment of experts**

The experts will be invited to participate only in their individual scientific capacity. An expert will not represent the government of country of which he or she is a citizen, or the institution with which he or

she is associated. The experts designated will not receive any remuneration, however, where a physical expert meeting is held, travel costs, subsistence allowance and other related expenses will be the exclusive responsibility of FAO and WHO.

### **Applications**

Interested applicants should submit their curriculum vitae including a description of their education, work experience and a list of peer reviewed publications relevant to the factors indicated above (please do not include reprints in your submission unless specifically requested at a later date). Applicants must have a good working knowledge of English as correspondence and any future meeting will be in English only.

Before participating in any related activity, the selected experts will be required to declare any potential interests associated with the subjects and substances that will be evaluated through completion of a standard form developed by FAO or WHO. They will be asked to indicate in writing any interest (financial and intellectual) on their part or that of their spouse that may affect their scientific independence as experts including one or more of the following conditions: employment (past or present) by any commercial enterprise or private or civil sector association; a recipient of research or other study grants from such enterprises or associations; or shareholdings in commercial enterprises active in fields related to food safety. These declarations will be evaluated and retained by the Joint Secretariat. In addition, a confidentiality undertaking is also to be signed to ensure proper handling of dossiers and proprietary information.

### **Deadline**

Applications should be sent to FAO and WHO by **31<sup>st</sup> July 2011** to the addresses below, electronic applications are preferred. Applications received after that date will be evaluated only if additional expertise is required and the evaluation and selection will follow the same procedure as described.

### **Data submissions and applications in response to the call for data and experts should be sent to:**

Nutrition and Consumer Protection Division  
Attention: **Ms Concepcion Quevedo**  
Food and Agriculture Organization of the  
United Nations  
Viale delle Terme di Caracalla  
00100 Rome, Italy  
*Telephone:* + 39 06 5705 2306  
*Facsimile:* + 39 06 5705 4593  
*Email:* [jemra@fao.org](mailto:jemra@fao.org)

and Department of Food Safety and Zoonoses  
Attention: **Dr Kazuko Fukushima**  
World Health Organization  
20, avenue Appia  
1211 Geneva 27  
Switzerland  
*Telephone:* +41 22 791 2920  
*Facsimile:* +41 22 791 4807  
*Email:* [foodsafety@who.int](mailto:foodsafety@who.int)

**Example of Foodborne Parasitic Diseases and Causative Parasites\***

<b>Disease/Infection</b>	<b>Parasite</b>	<b>Common food vehicles</b>	<b>Ranking</b>	<b>Explanation of your ranking in terms of public health and socio-economic aspects</b>
<b><i>Meat borne parasites</i></b>				
Linguatulosis	<i>Linguatula serrata</i>			
Intestinal sarcocystosis	<i>Sarcocystis hominis</i>			
Taeniasis	<i>Taenia saginata</i> , <i>Taenia solium</i> , <i>Taenia asiatica</i>			
Neurocysticercosis	<i>Taenia solium</i>	(contaminated by <i>T. solium</i> eggs)		
Toxoplasmosis	<i>Toxoplasma gondii</i>			
Trichinellosis	<i>Trichinella spiralis</i> , <i>Trichinella britovi</i> , <i>Trichinella nativa</i> Other <i>Trichinella</i> spp.			
<b><i>Fish and shellfish borne parasites</i></b>				
Anisakiasis	<i>Anisakis simplex</i>			
Intestinal capillariasis	<i>Capillaria philippinensis</i>			
Clonorchiasis	<i>Clonorchis sinensis</i>			
Diphyllobothriasis	<i>Diphyllobothrium latum</i>			
Echinostomiasis	<i>Echinostoma</i> spp.			
Gastrodiscoidiasis	<i>Gastrodiscoides hominis</i>			
Gnathostomiasis	<i>Gnathostoma spinigerum</i>			
Heterophyiasis	<i>Heterophyes heterophyes</i>			
Metagonimiasis	<i>Metagonimus yokogawai</i>			
Nanophyetiasis	<i>Nanophyetus salmincola</i>			
Opisthorchiasis	<i>Opisthorchis felinus</i> , <i>Opisthorchis viverrini</i>			
Paragonimiasis	<i>Paragonimus</i> spp.			
<b><i>Plant (fruit and vegetable) borne parasites</i></b>				
Ancylostomiasis	<i>Ancylostoma duodenale</i>			
Angiostrongyliasis	<i>Angiostrongylus</i>			

	<i>cantonensis</i> , <i>Angiostrongylus</i> <i>costaricensis</i>			
Cryptosporidiosis	<i>Cryptosporidium</i> spp.			
Dicrocoeliasis	<i>Dicrocoelium</i> <i>dendriticum</i>			
Cystic echinococcosis	<i>Echinococcus</i> <i>granulosus</i>			
Alveolar echinococcosis	<i>Echinococcus</i> <i>multilocularis</i>			
Fascioliasis	<i>Fasciola hepatica</i> , <i>Fasciola gigantica</i>			
Fasciolopsiasis	<i>Fasciolopsis buski</i>			
Toxocariasis	<i>Toxocara</i> spp.			
Trichostrongyliasis	<i>Trichostrongylus</i> spp.			
Trichuriasis	<i>Trichuris trichiura</i>			
<b><i>Other parasites of concern for foodborne transmission</i></b>				
Ascariasis	<i>Ascaris lumbricoides</i>			
Blastocystosis	<i>Blastocystis hominis</i>			
Cyclosporiasis	<i>Cyclospora</i> <i>cayetanensis</i>			
Dientamoebiasis	<i>Dientamoeba fragilis</i>			
Amoebiasis	<i>Entamoeba histolytica</i>			
Giardiasis	<i>Giardia intestinalis</i>			
Hymenolepiasis	<i>Hymenolepis nana</i>			
Isosporiasis	<i>Isospora belli</i>			
Sparganosis	<i>Spirometra</i> spp.			

\* The parasitic diseases and causative parasites listed here are just examples. Please feel free to add if the parasite of your concern is not listed.