



Rhode Island Southeast Asian Community Fish Ingestion Study

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Project Partners

- Rhode Island Department of Environmental Management
 - Rhode Island Department of Health
 - Center for Environmental Studies of Brown University
 - Socio-Economic Development Center for Southeast Asians (SEDC)
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Background

- The Project Partners worked to increase environmental and public health awareness of the Southeast Asian community on the issue of mercury and Polychlorinated Biphenyls (PCB) ingestion.
 - Approximately 2% (23,167) of the Rhode Island population is Asian.
 - Project focused efforts in Providence County where 76% of the Rhode Island Asian community resides.
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Background (Cont.)

- The Southeast Asian community fish in the freshwater rivers streams and the ocean throughout Rhode Island.
 - The per capita fish consumption of this group is high.
 - Rhode Island coastal waters have an abundance fish and that contain levels of PCB and mercury.
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Project Goal

- The primary goal of this project was to assess Southeast Asian residents' environmental literacy concerning mercury contamination in fish and to gather cultural insights to inform the state's outreach and education planning.
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Project Process

- Partnership Formed
 - Survey Developed
 - SEDC Recruited Surveyors
 - Brown University Trained Surveyors
 - Surveys Conducted
 - Data Analysis
 - Project Report / with Recommendations
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Project Process

- The Partners discussed the issues related to mercury ingestion in the Southeast Asian population in Rhode Island.
 - The group was interested in developing an effective communications strategy about risks and benefits of eating fish.
 - CES then developed a draft survey that built on existing research about fish hazard done by Brown student Michael Joseph (2002).
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Survey Instrument

The environmental literacy tool consisted primarily of closed choice items and included questions in the following categories:

- Fishing and fish eating behavior
 - Awareness of food safety issues in US and abroad
 - Awareness of specific fish safety issues
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Survey Instrument (Continued)

- Willingness to change behavior
 - Trusted sources for information about safety
 - Optimal ways to communicate to other people
 - Basic demographic information
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Recruitment of Surveyors

SEDC recruited six individuals from the Southeast Asian community. Recruitment criteria included individuals who:

- Were fluent in English and either Laotian, Cambodian or Vietnamese
 - Had some previous surveying experience,
 - Were available for training
 - Were able to read and write in both languages
 - Had visibility/connections in their communities.
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Training Community Surveyors

- CES conducted two, two-hour training sessions with the six recruited surveyors.
 - CES covered the issues related to fish consumption, personal safety, the prospective surveyors own questions about the topic, and then introduced the survey.
 - Most of the time was spent reviewing the survey items, the intent of the questions, and face-to-face survey-giving behavior.
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Evaluation of Training

- There were three important limitations to the training:
 - Not all surveyors piloted tested before they went into the field,
 - Surveying was not monitored in the field, and,
 - Lack of input from the surveyors after all surveying was completed.
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Survey Results

- One hundred one (101) persons were surveyed.
 - Ninety-five people responded that they did eat fish and therefore were fully surveyed.
 - No compelling relationships were seen between any of the areas studied when examined using cross-tab analysis.
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Results (Distribution of Respondents by Country of Origin)

- 57% of the respondents were of Cambodian birth.
 - 26% were born in Laos.
 - 12% were born in the United States.
 - 5% were born in Thailand.
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Results (Behavior Relating to Fish Consumption)

58% catch their own fish. Among those who eat fish:

- 64 % eat fish because it tastes good.
 - 49% feel that it is good for them.
 - 47% were categorized as “infrequent fish consumers”, eating fish less than once a week.
 - 49% were regular eaters (eating fish one to four times per week, and only).
 - 5% were frequent eaters (eating fish four or more times per week).
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Results (Sources of Fish)

- 71% buy it from their local fish market.
 - 58% catch their own fish.
 - 48 receive it from friends and family.
 - 43% buy it at the supermarket.
 - 19% eat it at restaurants.
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Results (Perceptions of Fish Consumption Risk)

- 32% had heard of a ban on fishing or fish consumption.
 - 32% had heard of any food being unsafe in the United States.
 - 26% had heard of any fish being unsafe in the United States.
 - 35% had heard of any fish in Rhode Island containing mercury.
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Results (Perceptions of Fish Consumption Risk) Continued

Of those who had heard of some kind of fish ban in Rhode Island.

- 14% stated that they changed their habits with regard to fish consumption.
 - Stopped 62% (8/13) the amount of fish consumed from areas with posted warnings.
 - Limited 46% (6/13) the amount of fish consumed from areas with posted warnings.
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Results (Respondent's Trust Level For Different Groups)

- 85% ranked doctors with at least a score of “a lot of trust”.
 - 73% ranked scientists with at least a score of “a lot of trust”.
 - 67% gave the same score to state agencies.
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Recommended Messages

There were six general messages based on the survey results:

- *“How much fish do you eat?”*
 - *Where does this fish come from (where was this fish swimming)?*
 - *Fish can be healthy meals in the US.*
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Recommended Messages

- *Messages should always include alternative good sources of protein.*
 - *Mercury contamination in fish can't be seen or smelled.*
 - *It is most important for pregnant women and small children younger than six to receive an explanation of alternative good sources of protein and other healthy food.*
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Communication Channels

- Use health care providers, specifically doctor's offices and health clinics to distribute brochures printed in three languages.
 - DEM will investigate the distribution of brochures / information to Southeast Asians at state parks that have fishing locations.
 - Work with Department of Human Services to distribute material for those applying for food stamps and temporary emergency assistance.
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Community Partner

SEDC to conduct outreach activities in Providence over the next six months. They will organize meetings of the Southeast Asian community:

- First Workshop at Cambodian Temple, Providence will be held on April 17, 2006.
 - Second Workshop at Cambodian Temple, Providence will be held on June 2, 2006.
 - Third Workshop Laotian Temple, Providence will be held on July 21, 2006.
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Summary

- The Environmental Literacy Tool was a useful survey tool.
 - SEDC was an effective way to conduct surveys and follow-up activities.
 - There is need to develop environmental health messages for the Southeast Asian community.
 - Health professionals and state agencies are good channels for environmental health messages.
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NEIWPC - 2006 Northeast Regional Mercury
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Report located on the web at:

<http://www.dem.ri.gov/programs/benviron/waste/pdf/finalfis.pdf>

