

# Securing Safe Food During Disasters

## How Rockport and Refugio City Councils Protected Food Consumers After Hurricane Harvey Hit the Texas Coastal Bend

### Instructor's Guide

|   |   |
|---|---|
| <b>Authors:</b>   | Alejandro (Alex) Castillo   |
| <b>Key Terms:</b><br><br>(list all keywords and define) | <p><b>Food Security:</b> a situation that exists when all people at all times have physical, social and economic access to sufficient, safe and nutritious food that meets their dietary needs and food preferences for an active and healthy life.</p> <p><b>Food Safety:</b> assurance that food will not cause harm to the consumer when it is prepared and/or eaten according to its intended use.</p> <p><b>Disaster:</b> a serious disruption of a community or society functioning due to hazardous events, leading to human, material, economic and/or environmental losses and impacts.</p>  |
| <b>Student Learning Objectives:</b>                     | <p>Upon completion of this case study students will be able to:</p> <ul style="list-style-type: none"> <li>• Understand food safety and food security and how these two concepts are linked.</li> <li>• Describe issues about food safety application during response to a disaster.</li> <li>• Describe key issues in effective decision making related to ensuring food safety during mass food provision.</li> <li>• Identify key elements composing effective food safety management programs and how to incorporate those elements in a disaster response plan.</li> </ul>   |
| <b>Overview/Background of Case Study:</b>               | <p>In August of 2017, Hurricane Harvey made landfall near Rockport, Texas as a Category 4, and over 4 days inflicted severe damage to the Texas Coastal Bend, with a death toll of 103 and a cost of \$125 billion. The rapid response teams of various county seats began applying procedures according to their preparedness plans. In this case study, the focus will be on the application of food safety measures by the multiple volunteers when trying to feed a massive amount of people. Volunteer organizations reported serving over 4,000 meals per day, and other cities told about numerous volunteers setting camps or small food cooking stations to feed the people in need. All this participation helped in securing a provision of foods for many people who would have suffered deprivation otherwise. The question that remains is whether food security as understood by the FAO was achieved or food safety, an important component of food security, was neglected. The lack of formal food safety measures was acknowledged by interviewed city officers. In this case, the challenge was</p> |

|                               |  |
|-------------------------------|--|
|                               | to feed large amounts of people under poor conditions for adequate hygiene during preparing and serving foods, creating the dilemma whether the priority is to provide nutrients even if food safety practices cannot be entirely implemented.   |
| <b>Estimated Time:</b>        | The estimated time for completing this will be 1 week, in 3 classroom sessions (online or face-to-face) and 2 days of group work. When online, a chat or zoom session will be scheduled.   |
| <b>Using this Case Study:</b> | <p><b>Type of Case Study:</b><br/>Historical</p> <hr/> <p><b>Instructional Format:</b></p> <ul style="list-style-type: none"> <li>• Discussion</li> <li>• Problem-Based Learning</li> </ul> <hr/> <p><b>Case Study Versions:</b><br/>The paper version may be distributed to the students in conducting the case study in a face-to-face setting. This version may also be uploaded to a virtual classroom for online courses. In these cases, the format would be similar, consisting of readings and assignments, class discussion (whether in classroom or online) with a requirement for completing a written document on an assigned topic. The electronic version may also be used in a face-to-face or online classroom setting.</p> <hr/> <p><b>Media:</b></p> <ul style="list-style-type: none"> <li>• <a href="https://www.youtube.com/watch?v=ZR0SSTIYBa4">https://www.youtube.com/watch?v=ZR0SSTIYBa4</a></li> <li>• <a href="https://www.youtube.com/watch?v=FOsSfCFH2VM">https://www.youtube.com/watch?v=FOsSfCFH2VM</a></li> <li>• <a href="https://www.youtube.com/watch?v=dY9HM3obEHU">https://www.youtube.com/watch?v=dY9HM3obEHU</a></li> <li>• <a href="https://www.youtube.com/watch?v=3HzKi8wGaJw">https://www.youtube.com/watch?v=3HzKi8wGaJw</a></li> <li>• <a href="https://www.youtube.com/watch?v=tJzMMNZNtK4">https://www.youtube.com/watch?v=tJzMMNZNtK4</a></li> <li>• <a href="https://www.youtube.com/watch?v=NRDGziGu04I">https://www.youtube.com/watch?v=NRDGziGu04I</a></li> <li>• <a href="https://www.youtube.com/watch?v=AOXCA-XwOBg">https://www.youtube.com/watch?v=AOXCA-XwOBg</a></li> <li>• <a href="https://www.youtube.com/watch?v=3hb83mhtMRE">https://www.youtube.com/watch?v=3hb83mhtMRE</a></li> <li>• <a href="https://www.foodsafety.gov/">https://www.foodsafety.gov/</a></li> <li>• <a href="http://www.fao.org/fileadmin/templates/faoitally/documents/pdf/pdf_Food_Security_Cocept_Note.pdf">http://www.fao.org/fileadmin/templates/faoitally/documents/pdf/pdf_Food_Security_Cocept_Note.pdf</a></li> </ul> <hr/> <p><b>Student Considerations:</b></p> <ul style="list-style-type: none"> <li>• The design of the case study is to be presented to the entire class, with discussion of concepts, presentation of the story and then discussing with focus on food safety. Then the students will be separated in 4 groups, each of which will work on a specific assignment. Students will be required to seek out additional information (listed in the electronic and the paper version) to support their group work.</li> </ul> |

|   |   |
|---|---|
|   | <ul style="list-style-type: none"> <li>• Pre-teaching or review sessions are not necessary. However, basic texts will be needed to review during the course of the case study</li> </ul>  |
| <p><b>Leadership Frames:</b></p>          | <p>The leadership frames used in this case study are</p> <ul style="list-style-type: none"> <li>• Structural: Incorporating and working with other leaders in promoting awareness of food safety to educate the populations so they will have food safety present (both leaders and the people), and apply it under all circumstances, including emergency</li> <li>• Human resources: Knowing that the organization needs trained personnel to ensure that in case of an emergency, the entire food provision system will be under a food safety plan.</li> </ul>  |
| <p><b>Suggested Teaching Outline:</b></p> | <p><b><u>Day 1</u></b><br/> <b>Delivery format:</b> Face-to-face or online. In both cases, the written version and the digital version are used in combination. At the beginning of the case study, the students are given copies of the written version of the case study, which will serve as a study guide. For online format, all documents must be posted on the platform. Then, the digital version will be showed as a presentation. After showing the initial slides (Learning Objectives, Case Study Overview and What the Study is About) the concepts of Food Security and Food safety should be fully understood. Then, the digital version will be viewed to understand the facts about how food safety was viewed and handled during the disaster and aftermath. The students are assigned to groups for out of classroom activities. As described in case study digital and written versions, each group will work on will be assigned one of the following four food safety related aspects: education, training, inspection, and safe cooking. At this time, instructions for group work are communicated.</p> <p><b><u>Day 2:</u></b><br/> Extra-classroom work. Readings for discussion on Day 3 (students are reminded that they will need to produce a list of consulted sources to answer key questions). Gathering information for their assigned work group. Start envisioning a food safety plan for their assigned food safety-related aspects.</p> <p><b><u>Day 3</u></b><br/> <b>Delivery Format:</b> Face-to-face or online, mixed digital and written versions are used. Discussion of key questions. Proposal for solutions for better preparedness regarding food safety during and after disasters. Assignments for out of classroom activities will be given.</p> <p><b><u>Day 4</u></b><br/> Group work will continue outside the classroom. Preparation of written document (outline of food safety plan for their assigned food safety-related aspects)</p> <p><b><u>Day 5</u></b><br/> <b>Delivery Format:</b> Discussion of concepts, questions and answers and continuation of group work. Report will be due on Day 5.</p> |

|                                     |   |
|-------------------------------------|---|
| <p><b>Summative Assessment:</b></p> | <p>This case study may be applied as a learning tool in food safety and food microbiology courses. These courses provide basic knowledge for applying during this case study. Other academic programs where this case student can be applied include Community Health, Management, Political Science etc. After completion of this case study, the students will be able to:</p> <ul style="list-style-type: none"> <li>• Understand food safety and food security and how these two concepts are linked.</li> <li>• Describe issues about food safety application during response to a disaster.</li> <li>• Describe key issues in effective decision making related to ensuring food safety during mass food provision.</li> <li>• Identify key elements composing effective food safety management programs and how to incorporate those elements in a disaster response plan.</li> </ul> <p>Please consult the written case study and rubric for details on the summative assessment.</p> |
| <p><b>Resources Needed:</b></p>     | <p>Links to all resources will be provided in the slides and the paper version.</p>   |