

RESEARCH BRIEF

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Consumers are willing to pay more for HAB-free mussels

Based on EFD Discussion Paper *Consumers' preferences for testing algal bloom in seafood markets. A comparison study of mussel consumption in China, Vietnam, and Chile* by Zihan Nie, Yu Jiang, Marcela Jaime, César Salazar & Thong Ho.

Harmful algal blooms (HABs) threaten the seafood industry, impacting food safety and generating economic losses. This research explores global consumer preferences in China, Chile, and Vietnam to reduce the risk of contamination in mussels through HABs. The study finds that consumers strongly prefer a test that guarantees HAB-free mussels, revealing a significant willingness to pay (WTP). Perceptions towards HAB and mussel attributes play a role in explaining preference heterogeneity for this test, which varies across countries. These results highlight the potential welfare losses from HABs and the benefits of implementing food safety policies.

Key Messages

- Consumers may avoid consuming mussels if they perceive a high risk of HAB contamination, even under government monitoring.
- HABs have significant welfare losses for consumers, but policies to ensure food safety in seafood markets can improve social welfare.
- Perceptions about HABs and mussel attributes play a role in explaining consumer preferences, but the link varies across contexts.
- Trust in the food certification system is crucial for consumers to be willing to pay a premium for HAB-free mussels.

Background and Methodology

HABs are a global marine phenomenon with significant health and economic impacts. In coastal communities, human

health can be affected through direct exposure. Still, the more common channels include inhalation of toxins released by the algae and particularly the consumption of contaminated shellfish,

leading to poisoning syndromes. The severity of these is associated with exposure levels and the source of contamination.

Potential health effects range from gastroenteritis and abdominal pain to liver, kidney, and intestinal damage. This disease risk encompasses significant health costs to individuals (e.g., healthcare and medication expenses, loss of income due to illness, cost of pain and suffering, cost of death, etc.).

Also, the social impacts of HAB include increased public health risks and potential disruptions to livelihoods, particularly in communities that rely heavily on seafood consumption and coastal resources.

Climate change is regarded as one potential driver of the increasing HAB risk. Temperature variation affects circulation patterns, prolongs stratification periods, and causes variations in the water column's physical structure, which favors HAB's occurrence.

This study investigates consumer preferences for a market mechanism to reduce HAB risk and how these preferences relate to HAB perceptions and seafood attributes. To do so, Choice

experiments were conducted in China, Chile, and Vietnam to assess consumer global preferences for HAB-free mussels.

Results

Consumers in all three countries exhibited strong preferences for a test that eliminates HAB contamination in mussels and are willing to pay a premium price for mussels guaranteed to be free from harmful algal blooms (HABs).

While the general preference for HAB-free mussels is consistent across countries, other factors (like production method and country of origin) influence preferences differently.

The increasing occurrence of HABs can lead to significant welfare losses for consumers due to concerns about health risks and reduced consumption.

Policy Implications

HABs have substantial welfare losses for consumers. Implementing food safety policies, such as certification systems, consumer education, and transparent regulatory measures, can significantly improve social welfare. Tailored policy formulations based on country-specific preferences are essential for effective implementation.

The Environment for Development initiative is a capacity-building program in environmental economics focused on international research collaboration, policy advice, and academic training. It consists of centers in Central America, Chile, China, Colombia, Ethiopia, Ghana, India, Kenya, Nigeria, South Africa, Sweden (University of Gothenburg), Tanzania, Vietnam, Uganda, and the US

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