

New report offers framework to analyze effects of potential changes to the US food system

January 13 2015

To aid U.S. policymakers and other stakeholders who make decisions about the nation's food system, a new report from the Institute of Medicine and National Research Council offers a framework for assessing the health, environmental, social, and economic effects of proposed changes to the system.

Often, making a change that affects one part of the [food system](#) for one purpose has consequences - intended or unintended - for other parts of the system, the report says. For example, a recommendation to increase the consumption of fruits and vegetables to promote healthier diets raises questions about the potential environmental or social impacts of increasing their supply, such as driving a greater need for irrigation water or farm labor. The [framework](#) encourages broad and methodical thinking about the complexity of the food system and its relationship to health, environment, society, and the economy.

"We hope this analytical framework will be widely used by researchers, policymakers, and others when they consider alternative policies or potential changes that affect the U.S. food system," said Malden C. Nesheim, chair of the committee that wrote the report, and provost emeritus and professor of nutrition emeritus at Cornell University. "Such assessments can help ensure that the food system supports the health and the quality of life of our citizens and the sustainability of the environment."

The report's framework recommends six steps: identify the problem; define the scope; identify the scenarios; conduct the analysis; synthesize the results; and report the findings. It also includes a set of principles to be considered throughout all steps of the process:

- Consider effects across the full food system. Positive and negative health, environmental, social, and economic effects occur all along the [food supply chain](#).
- Address all domains and dimensions of effects. Any single assessment should consider health, environmental, social, and economic effects and recognize that trade-offs between the different effects will often be necessary.
- Account for system dynamics and complexities. An assessment should account for the food system being a complex, adaptive system with a wide variety of actors and processes that are interdependent and can adapt their behavior.
- Choose appropriate methods. Careful choice of metrics and methods is fundamental to conducting a meaningful assessment; these vary across health, environmental, social, and [economic effects](#) because of measurement challenges specific to each of these domains. The report identifies selected metrics, data sources, analytical techniques, and simulation models that might be used in an assessment of a policy or action affecting the food system.

The report also offers six examples to illustrate how the framework might theoretically be applied to analyze actions or policies, including the use of antibiotics in animal feed, policies mandating biofuel blending in gasoline supplies, and recommendations for fish consumption and health.

"The U.S. food system is complex, and when any policies or decisions are made that impact the system, there will be trade-offs," said Victor

Dzau, president of the Institute of Medicine. "The framework developed by the committee could help foster improved decision-making on how the [food](#) system might be better organized, altered, and maintained."

The study was sponsored by the JPB Foundation. The National Academy of Sciences, National Academy of Engineering, Institute of Medicine, and National Research Council make up the National Academies. They are private, independent nonprofit institutions that provide science, technology, and health policy advice under a congressional charter granted in 1863. Established in 1970 under the charter of the National Academy of Sciences, the Institute of Medicine provides independent, objective, evidence-based advice to policymakers, [health](#) professionals, the private sector, and the public. The National Research Council is the principal operating arm of the National Academy of Sciences and the National Academy of Engineering. For more information, visit <http://www.national-academies.org>. A committee roster follows.

Provided by National Academy of Sciences

Citation: New report offers framework to analyze effects of potential changes to the US food system (2015, January 13) retrieved 23 April 2024 from <https://medicalxpress.com/news/2015-01-framework-effects-potential-food.html>

<p>This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.</p>
--