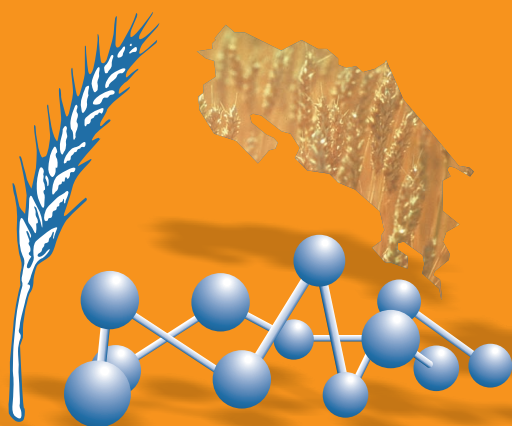


# STAKEHOLDER CONVERGENCE ON NUTRITION POLICY

A Cross-Case  
Comparison  
of Case Studies in  
Costa Rica, Brazil  
and Canada



Nutrition Facts			
Per 125 mL (87 g)			
Amount		% Daily Value	
Calories	80		
Fat	0.5 g		
Saturated	0 g	1 %	
+ Trans	0 g	0 %	
Cholesterol	0 mg		
Sodium	0 mg	0 %	
Carbohydrate	18 g		
Fibre	2 g	6 %	
Sugars	2 g	8 %	
Protein	3 g		
Vitamin A	2 %	Vitamin C	10 %
Calcium	0 %	Iron	2 %

A Report by the CARMEN Policy Observatory on chronic noncommunicable disease policy 2007



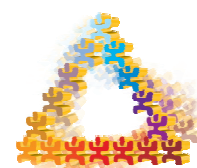
Public Health  
Agency of Canada

Agence de la santé  
publique du Canada



**Pan American  
Health  
Organization**

Regional Office of the  
World Health Organization



CARMEN





# STAKEHOLDER CONVERGENCE ON NUTRITION POLICY

## A Cross-Case Comparison of Case Studies in Costa Rica, Brazil and Canada

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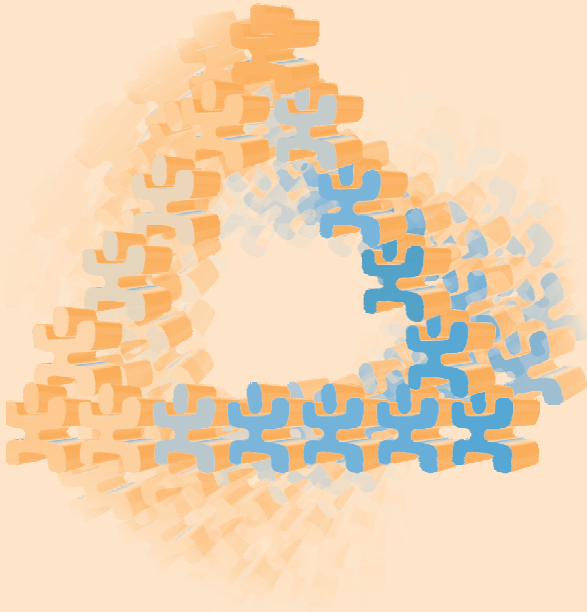
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## SUMMARY

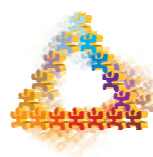
**T**his study is a cross-case comparison of three nutrition case studies across three national jurisdictions: Costa Rica, Brazil, and Canada. Each case study used a common methodology to examine complex processes by which nutrition policies were formulated and approved at the State level. Our conceptual framework considered contexts, ideas, nature and availability of evidence, policy interests and conflicts, institutions, policy instruments, and action plans. Data collection included document review and key informant interviews with representatives of government, the voluntary sector, industry, and academia (n=20 in Costa Rica, n=16 in Brazil, and n=24 in Canada).

A high degree of stakeholder convergence developed in all three countries, and this convergence facilitated the process of intersectoral policy development. Success factors included (a) strategic national and/or international nutrition policy documents articulating a vision and recommended actions; (b) participants' early adoption of a population health frame; (c) innovative change management processes led by internal "champions" with access to both technical expertise and senior political support; and (d) a solid base of evidence including cost-effectiveness data, industry-supported studies, and consumer research.

We positioned findings within a framework depicting policy-making capacity (PMC) at three levels: individual, organization, and system. Overall, we found that, when there is "high" PMC at the individual and system levels, a policy proposal can move forward to a successful policy outcome, even when organizational PMC is "medium." Gaps in organizational PMC included resource shortages, "stop-start" policy processes, fragmentation of health policies and programs, insufficient communication with stakeholders, and policy silos.

While each case study told an important story of policy innovation, until we examine the policy implementation process (stage two of our research), we cannot be confident that the goals have, in fact, been successfully realized. Recommendations consisted of enhancing training and applied research opportunities for senior policy makers, including the initiation of international policy dialogues, to build PMC in integrated chronic disease prevention and control strategies.

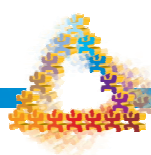
**Key Words:** *case study; nutrition; policy formulation; population health*



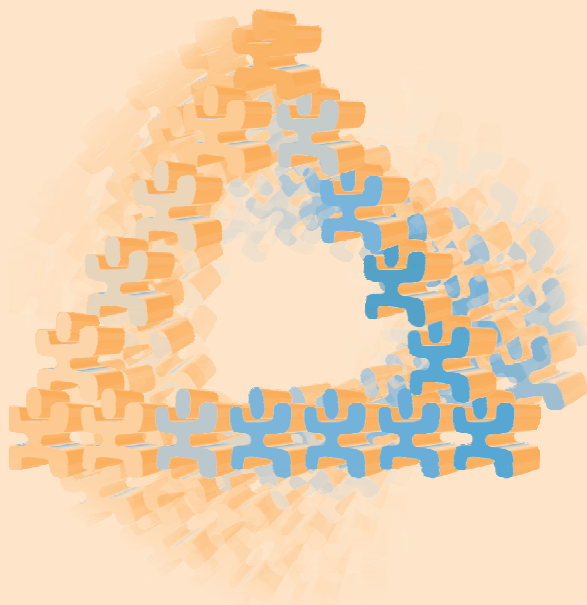


# TABLE OF CONTENTS

INTRODUCTION	1
Figure 1: <i>Evidence-Based Decision Making</i>	2
Rationale for Nutrition Case Studies	2
METHODOLOGY	4
RESULTS	5
Part A: Overview of Nutrition Case Studies	5
Costa Rica: <i>Formulation of the Policy on Fortification of Wheat Flour with Folic Acid</i>	5
LESSONS LEARNED	6
Brazil: <i>Observatory on Chronic Noncommunicable Disease – National Food and Nutrition Policy (PNAN) 1999-2005</i>	6
LESSONS LEARNED	7
Canada: <i>Stakeholder Convergence on Nutrition Labeling: Building Consensus on a Complex Issue</i>	7
LESSONS LEARNED	8
Part B: <i>PMC at Three Levels: Individual, Organization, and System</i>	9
Table 1: <i>PMC Ranking at Three Levels: Individual, Organization, and System</i>	9
1. Individual PMC	10
2. Organization PMC	10
3. System PMC	11
Conclusions and Recommendations	12
Figure 2: <i>Building Capacity for Policy Making at Three Levels: Individual, Organization and System</i>	12
REFERENCES	14
APPENDIX	16
Appendix 1: <i>Analytic Framework – Policy Formulation Stage</i>	16







# INTRODUCTION

Studies conducted by the World Health Organization's (WHO's) CINDI<sup>4</sup> and CARMEN<sup>5</sup> networks document common health policy challenges across the Americas (Pan American Health Organization, 2006). Currently, few data are available to assist decision makers in evaluating policies aimed at both preventing and controlling chronic noncommunicable diseases (NCDs) such as obesity, diabetes mellitus, cardiovascular disease, hypertension and stroke, and some types of cancer (WHO, 2004). In 2001, chronic NCDs accounted for 60% of the 56.5 million deaths in the world and 46% of the global burden of disease. These figures are expected to rise to 73% and 60%, respectively, by 2020 (WHO, 2002).

In 2003, recognizing the need to strengthen chronic NCD prevention and control measures, Member States of the Pan American Health Organization (PAHO) asked Canada<sup>6</sup> to assume

a lead role in establishing the first CARMEN Observatory on Chronic Non-communicable Disease Policy in the Americas. The goal of the observatory was to support the development of integrated chronic disease prevention policies through the systematic analysis of policy formulation, approval, and implementation processes.

Integrated prevention strategies refer to the determination and simultaneous confrontation of multiple risk factors common to several chronic NCDs (in contrast to a process of attacking many individual diseases separately). Specifically, integrated chronic disease prevention consists of:

*interventions that address common risk factors through the health system and other existing community structures ... a comprehensive approach that combines varying strategies for implementation; intersectoral action to implement health policies to address the major determinants of health that fall outside the remit of the health system; efforts to combine population and high-risk approaches by linking prevention actions of various components of the health system, including health promotion, public health services, primary care and hospital care. (CARMEN, 2007)*

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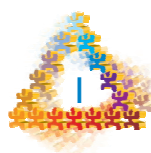
<sup>4</sup> Countrywide Integrated Noncommunicable Diseases Intervention programme, an initiative of the World Health Organization's Regional Office for Europe.

<sup>5</sup> Spanish acronym for *Conjunto de Acciones para la Reducción Multifactorial de las Enfermedades No- transmisibles* [Initiative for Integrated Prevention of Non-communicable Diseases in the Americas], CARMEN, an initiative of the Pan American Health Organization's Regional Office for the Americas, and promoted by the World Health Organization.

<sup>6</sup> The WHO Collaborating Centre on Chronic Noncommunicable Disease Policy is located in the Centre for

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Chronic Disease Prevention and Control, Public Health Agency of Canada (formerly Health Canada).

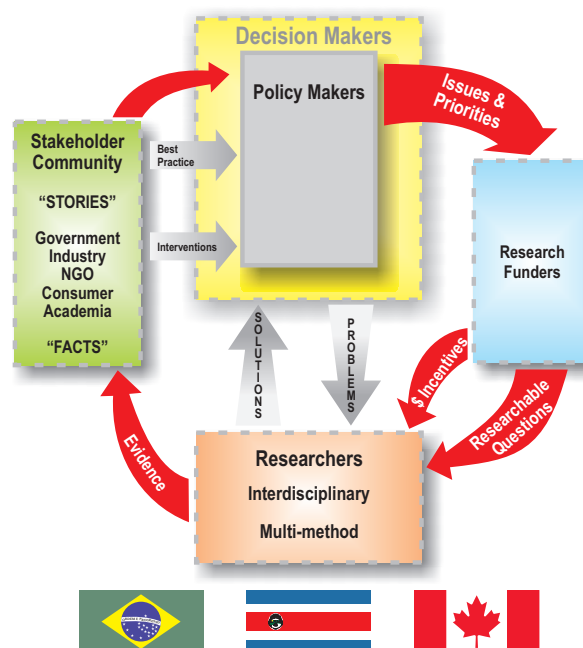


In 2004, funding from Health Canada's International Affairs Directorate moved the concept of a policy observatory forward. An initial project involved three pilot case studies implemented in Costa Rica, Brazil, and Canada in 2005-2006. Each case study examined nutrition policy formulation and approval processes at the State level. Using a common methodology, Technical Working Groups in the three countries examined the following overarching research questions:

- ▲ What processes were used to formulate and approve nutrition policies?
- ▲ What key conditions and factors influenced the formulation and approval of the nutrition policies?
- ▲ What salient lessons were learned about intersectoral approaches to policy formulation and approval?

Technical Working Groups included senior decision makers (eg, policy analysts, program managers) and academic researchers with expertise in areas related to the study. In Figure I, we present the model underpinning the research design<sup>7</sup> and highlight the interactions between policy makers, academics, and funders at all stages of the process. The Technical Working Groups collaborated through a series of technical workshops, teleconferences, and regular e-mail communication.

Figure I: Evidence-Based Decision Making



Note: Figure I was adapted from Canadian Health Services Research Foundation. (1998). *Growth through innovation: 1998 Annual Report*. Figure 5. Evidence-based decision-making: Where to focus for improvement, p. 38. Available from [http://www.chsrf.ca/other\\_documents/annual\\_reports/pdf/1998\\_e.pdf](http://www.chsrf.ca/other_documents/annual_reports/pdf/1998_e.pdf). Accessed 30 July 2007.

## Rationale for Nutrition Case Studies

On the international stage, industrialization, urbanization, economic development, and market globalization have resulted in significant dietary and lifestyle changes over the past decade (WHO, 2003, p. 1). Negative health and nutritional outcomes in populations, particularly in developing countries and in countries in transition, are the result of these political, economic, social, and environmental shifts:

*While standards of living have improved, food availability has expanded and become more diversified, and access to services has increased, there have also been significant negative consequences in terms of inappropriate dietary patterns, decreased physical activities and increased tobacco use, and a corresponding increase in diet-related chronic diseases especially among poor people (WHO, 2003, p. 1).*

<sup>7</sup> Figure I was adapted from Canadian Health Services Research Foundation. (1998). *Growth through innovation: 1998 Annual Report*. Figure 5. Evidence-based decision-making: Where to focus for improvement, p. 38. Available from [http://www.chsrf.ca/other\\_documents/annual\\_reports/pdf/1998\\_e.pdf](http://www.chsrf.ca/other_documents/annual_reports/pdf/1998_e.pdf). Accessed 30 July 2007.

To implement effective and sustainable food and nutrition policies, international experts call for a new platform “not just of dietary and nutrient targets” (WHO, 2003, p. 2), but of a broader examination of the determinants of nutritional health (eg, ecological, societal, and behavioral aspects beyond causation mechanisms). This platform, proposed by the WHO, is congruent with the components of a population health approach<sup>8</sup> – a key orientation of health ministries in Canada, Costa Rica, and Brazil since the mid-1990s.

Healthy eating has emerged as a key determinant of human health and development through the lifespan (Frank & Finegood, 2007). However, the national food policies of many developing countries focus on undernutrition and fail to address the prevention of chronic NCDs (WHO, 2003, p. 2). To address complex issues, such as the prevention of chronic NCDs and food insecurity,<sup>9</sup> nutritional considerations must be integrated into health, agriculture, education, social, and economic policies and programs (Dietitians of Canada, 2007). However, taking action has proved challenging, and examples of effective intersectoral nutrition policy innovation in the Americas are limited.

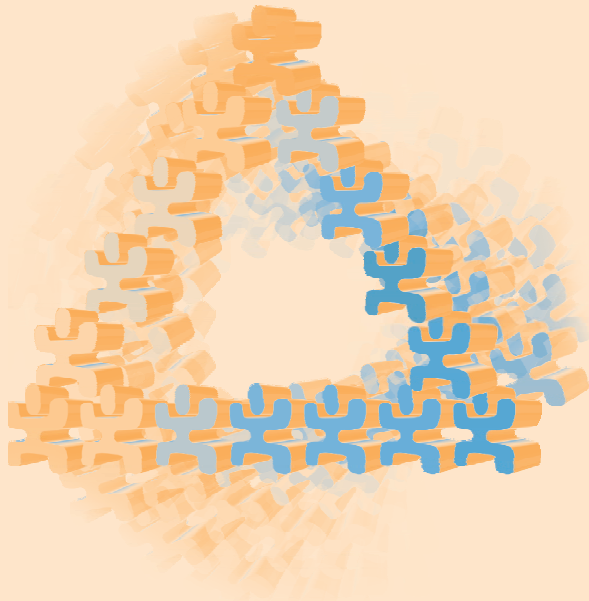
Recently, Raine (2005) conducted an overview and synthesis of healthy eating in Canada. She concluded that there are “huge gaps in our understanding of the process of intervening in macro-level environments” (p. S13) and called for investment in research focused on both the collective determinants of healthy eating and on policy contexts for promoting healthy

eating, stating that “policy is a powerful means of mediating multiple environments” (p. S13).

We posit that a cross-case comparison of findings from three nutrition case studies across three national jurisdictions adds to the evidence base by (a) illuminating a range of effective policy levers in preventing and controlling chronic NCDs; (b) describing requisites for policy formulation and approval in diverse settings; (c) assessing capacities for systematic data collection and analysis at multiple levels; and (d) initiating intersectoral technical support in policy review and analysis.

<sup>8</sup> An essential feature of a population health approach is directing interventions towards a range of individual (biological, behavioral) and collective (social, cultural, physical, economic and political) determinants of health. Developing, fostering and supporting collaborations between multiple sectors (e.g., government, industry and voluntary sector) are critical success factors as many of the determinants lie outside the remit of the traditional healthcare system.

<sup>9</sup> Food security implies that all people, at all times, have access to sufficient, nutritious, safe, personally acceptable and culturally appropriate foods that are produced, procured and distributed in ways that are environmentally sound, socially just, and sustainable (adapted from Fairholm, 1999).



# METHODOLOGY

In this study, we focused on the first three stages of the policy cycle: agenda setting, policy formulation, and decision making (Howlett & Ramesh, 1995). This strategy imposed boundaries on a complex, international case study research design that required significant coordination and monitoring (Yin, 1989). In our Conceptual Framework (Appendix I), we considered a variety of factors including contexts, ideas, nature and availability of evidence, policy interests and conflicts, institutions, policy instruments, and policy action plans. Implicit in our analysis was the recognition that a major goal of policy formulation is to achieve consensus (ie, stakeholder convergence) on how to best address a policy idea. Early agreement among stakeholders on a common issue frame facilitates the policy development process (Campbell et al., 2005).

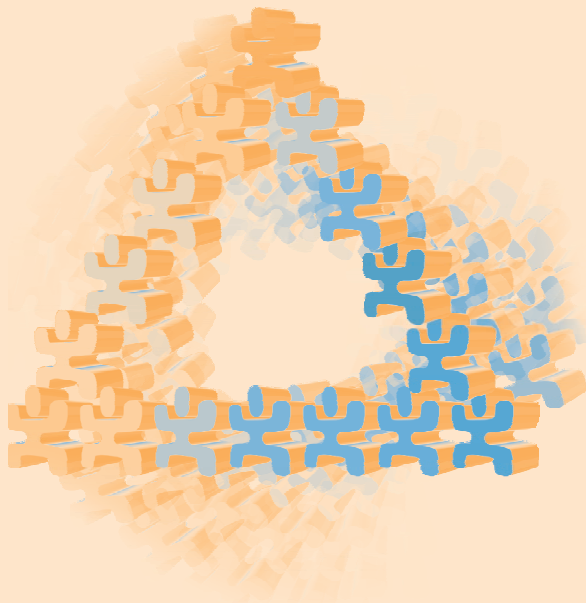
Data collection included document review (eg, peer-reviewed articles; government reports; expert knowledge of individuals, groups, and networks; parliamentary records; media reports); and key informant interviews. Key informants, identified through a “snowball sampling” process (Patton, 1987), were affiliated with multiple sectors including state government (health and nonhealth departments), nongovernmental organizations (NGOs), health professional associations, consumer advocacy groups, food industry, trade associations, elected officials, and academia. Key informant interviews (20 in

Costa Rica, 16 in Brazil, and 24 in Canada) were conducted by trained researchers. Each interview was approximately 90 minutes in duration, and each was completed using a piloted semi-structured interview guide, translated, and back-translated in English, Spanish, and Portuguese. Key informants signed informed consent forms as per research ethics protocols at the national level.

Researchers performed content analysis of the data, and apparent themes and patterns were identified in a process of open coding (Stake, 1995; Miles & Huberman, 1994). A qualitative data analysis software program (NVivo6) was used to sort the data. The use of code books and debriefing sessions to resolve coding issues helped to increase consistency. Further, audit trails were established to document the process that researchers followed to arrive at their final conclusions.





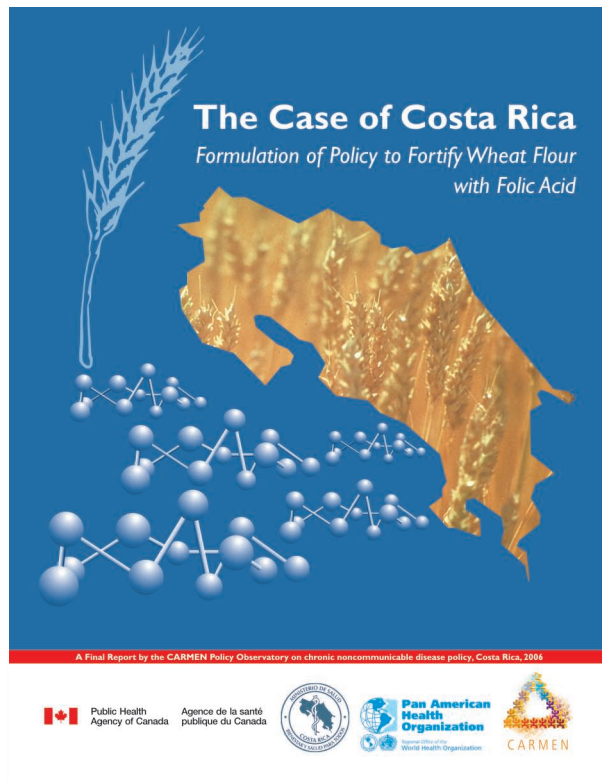


## RESULTS

We first provide an overview of each case study, including a summary of salient lessons learned (Part A). Next, we present cross-case findings pertaining to building policy-making capacities (PMCs) at three levels: individual, organization, and system (Part B).

### Part A: Overview of Nutrition Case Studies

#### Costa Rica: Formulation of the Policy on Fortification of Wheat Flour with Folic Acid



In 1997, a national decree on the fortification of wheat flour with folic acid was approved by the Ministry of Health of Costa Rica. The goals of the decree included reducing folate deficiencies and decreasing the prevalence of congenital defects, including neural tube defects,<sup>10</sup> which constitute the second leading cause of infant mortality in Costa Rica. With regard to NCD prevention, low folate intake has been associated with increased risk for heart disease (Rimm *et al.*, 1998; Schnyder *et al.*, 2001). Clinical and epidemiological studies indicate that higher dietary folate intake and blood folate levels are associated with a lower risk of colorectal cancer (Kim, 2003). However, Mason *et al.* (2007) recently reported that the number of colon cancer cases in Canada and the United States increased substantially after manufacturers began fortifying cereal grains with folic acid in the late 1990s. Stating that these observations alone do not prove causality, Mason *et al.* called for cautious approaches when instituting or enhancing fortification programs until current evidence gaps have been addressed.

The context in which policy negotiations occurred was characterized by complex transformations in Costa Rica's economic, political, and social spheres. In the 1980s, Costa Rica

<sup>10</sup> Neural tube defects refer to abnormalities of the brain and spinal cord apparent at birth and believed to be related to a woman's folate intake before and during pregnancy (Sizer and Whitney, 2006, p. GL-11).

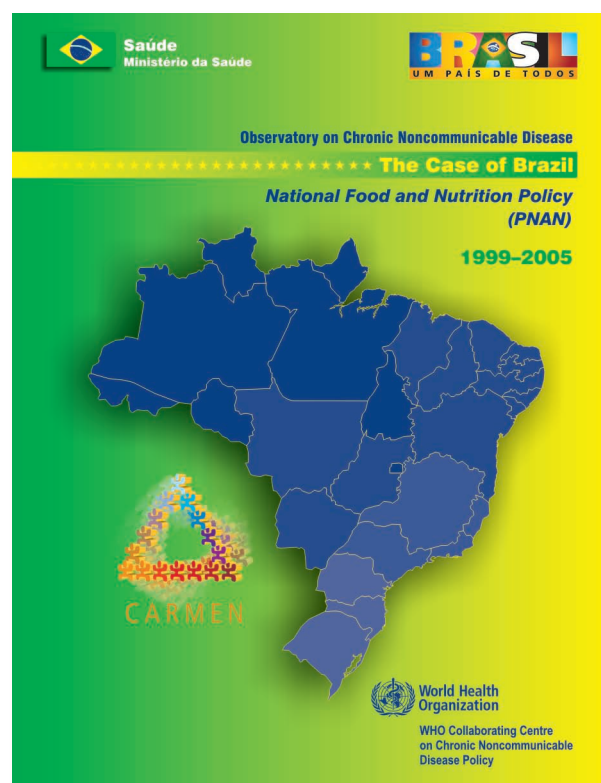
transitioned from an economy heavily regulated by the State to an economy open to free trade. The underlying premise was that international trade would serve as an “*engine for economic development*,” requiring that Costa Rica become competitive with foreign markets. As a result, the Costa Rican National Production Council lost control over wheat importation. With the liberalization of the national economy in Costa Rica, import barriers and price controls for both wheat and bread ceased to exist.

Throughout the policy formulation process, decision makers did not engage industry stakeholders in a discussion of the feasibility of fortifying wheat flour with folic acid. Rather, their strategy was to secure industry support for a policy decision already enacted by the Ministry of Health. The Steering Committee realized that industry collaboration was critical to success: “*An authoritarian attitude [on the part of government] would not facilitate an environment conducive to implementing the policy.*” This approach assisted Ministry officials in convincing industry of the importance of the measure and in achieving a sustainable alliance.

## LESSONS LEARNED

The wheat flour fortification policy was formulated, negotiated, and approved in a favorable national and international environment, although in the early stages, industry stakeholders expressed both technological and financial concerns. Consensus building was facilitated by a clearly articulated political decision, combined with the efforts of a motivated, knowledgeable team of policy makers in the Ministry of Health and a receptive food industry sector. Success factors included strong political-technical and public-private alliances, a strong body of scientific evidence, a feasible implementation strategy, effective teamwork, and most importantly, social responsibility on the part of the policy actors (Tacsan *et al.*, 2006).

## Brazil: Observatory on Chronic Noncommunicable Disease – National Food and Nutrition Policy (PNAN) 1999-2005



This case study analyzed the formulation of the Brazilian National Diet and Nutrition Policy,<sup>11</sup> a complex and groundbreaking directive based on a constitutional principle: “*adequate food as a basic human right.*” The Brazilian Ministry of Health assumed a lead role, in partnership with other ministries including Planning, Budgeting, and Management; Social Development and Hunger Alleviation; and Education. In 1999, the Ministry of Health approved the National Diet and Nutrition Policy as part of the National Health Policy in Brazil.

<sup>11</sup> The Brazilian Food and Nutrition Policy, part of the National Food and Nutrition Policy, is available in English at <http://www.saude.gov.br/alimentacao>.

The National Diet and Nutrition Policy is supported by a regulatory framework that includes (a) intersectoral actions that provide universal access to food; (b) quality assurance mechanisms applicable to both food products and services; (c) nutrition surveillance and monitoring; (d) promotion of healthy eating habits and lifestyles; (e) prevention and control of nutritional disorders and illnesses associated with food and nutrition; (f) promotion of research; and (g) human resources development and training.

## LESSONS LEARNED

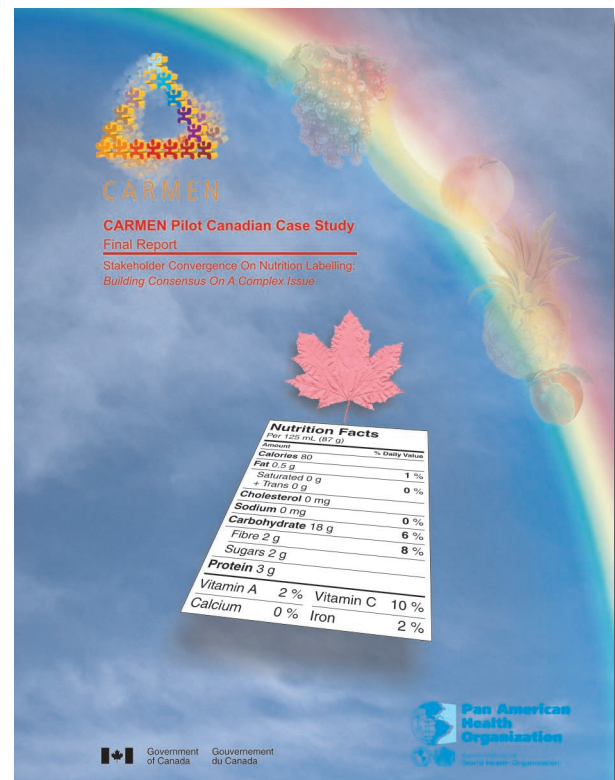
Case study findings illuminated key success factors for intersectoral nutrition policy formulation including:

*A national issue translated by the epidemiological relevance of the problem and placed on the government's public agenda to respond to social demands that were seen as significant public health challenges; a favorable climate in the Ministry of Health in that the department of diet and nutrition (human, technical, and financial resources) was being reorganized; and political pressure from government and civil society players interested in redefining government priorities and actions in the field of diet and nutrition (Bomtempo Birche de Carvalho et al., 2006).*

Barriers to the formulation of the National Diet and Nutrition Policy included disputes between experts (eg, physicians and nutritionists); fragmentation of chronic NCD policies and programs in the Ministry of Health; challenges associated with establishing regulatory frameworks for food production; marketing and labeling issues; and lack of political and technical agreement on terminology (eg, definitions of hunger, malnutrition, and food security). Despite these challenges, the National Diet and Nutrition Policy was formulated in a highly participatory manner with significant involvement of civil society. International cooperation was deemed helpful as was the high level of political support that drove the process nationally. The formulation process was helpful in focusing national diet and food policies on the prevention and control of

chronic NCDs and not solely on undernutrition (Bomtempo Birche de Carvalho et al., 2006).

## Canada: Stakeholder Convergence on Nutrition Labeling: Building Consensus on a Complex Issue



In 2002, mandatory nutrition labeling was introduced in Canada, and the scope of the regulations placed Canada at the forefront of nutrition labeling. Over the next 20 years, the accrued benefits to Canadians will be in the range of \$5 billion, an estimate based on reductions in direct and indirect costs associated with cancer, diabetes, coronary heart disease, and stroke (Health Canada, 2003).

Under the regulations, the labels of most prepackaged foods sold in Canada must present a Nutrition Facts table. The regulations also

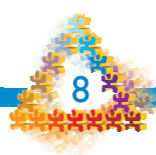
included updated criteria for nutrient content claims to better address consumer health issues. For the first time in Canada, diet-related health claims can highlight the relationship of certain nutrients and foods with reduced risks for heart disease, cancer, high blood pressure, and osteoporosis.

The 2002 regulations addressed three interrelated topics (ie, nutrition labeling, nutrient content claims, and health claims). The policy development process for these initiatives followed separate collaborative routes of documentation, expert and stakeholder consultations, and feedback. The merging of regulations pertaining to nutrition labeling, nutrient content claims, and health claims into one comprehensive “policy package” was an unexpected result ([Canada Gazette](#), Part II, January 1, 2003).

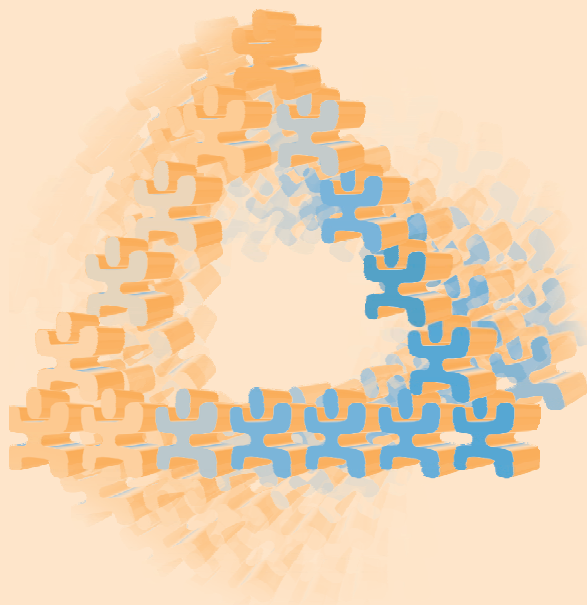
## LESSONS LEARNED

Broad stakeholder consultation, meaningful citizen engagement, use of internet-based information, and communication technologies contributed to policy innovation. In addition, we found that stakeholders’ perceptions of the policy formulation process can differ significantly from those of policy makers. In this study, key informants described policy formulation as a “stop-start” process, characterized by unexplained and lengthy delays. Decision makers, on the other hand, stated that the policy formulation process occurred at unprecedented speed, particularly citing the complex work associated with moving from the proposed amendments ([Canada Gazette](#), Part I, June 16, 2001) to their publication.

Case study findings pertaining to policy silos suggest that conflicting organizational mandates and priorities are able to sabotage intersectoral policy making. When organizational PMC is weakened by resource shortages, restructuring, and/or policy silos, decision makers must implement strategic changes in management practices to overcome barriers (Vogel *et al.*, 2007).










# RESULTS

## Part B: *PMC at Three Levels: Individual, Organization, and System*

In this paper, we focus our discussion on cross-case findings of building PMCs. In conducting the comparative analyses, we used a framework adapted from the earlier work of Shelley Bowen and Anthony Zwi (2005). Bowen and Zwi suggested that we can understand the policy-making process by examining three separate levels of capacity: individual, organization, and system. However, they are inconclusive about the relative importance of these three levels of capacity. Further, their work is preliminary and focuses on suggestion for how evidence can inform health policy.

We refined the Bowen and Zwi (2005) model and explored the relative significance of each indicator within each capacity level, as well as the overall importance of the three levels for successful policy outcomes. Our general findings were that when there is “high” PMC at the individual and system levels, a policy proposal can move forward to a successful policy outcome, even when organizational PMC is “medium.” We based this conclusion on the combined evidence from document reviews and key informant interview results, summarized in Table 1.

**Table 1:** *PMC Ranking at Three Levels: Individual, Organization, and System*

			
PMC Level	Costa Rica	Brazil	Canada
<b>Individual</b> Indicators (5): values, leadership, knowledge and skills, resources, and partnership and networking	Medium to High	High	High
<b>Organization</b> Indicators (5): policy processes and procedures, internal and external partnerships, leadership, resource allocation, and knowledge and skills	Medium*	High to Medium*	Medium*
<b>System</b> Indicators (4): values, ideology, politics, and economics	Medium to High	High	Medium to High

Source: Adapted from *Capacities Required for Policy Adoption and Adaptation* (Bowen & Zwi, 2005).

\* Although overall organizational PMC was ranked “medium” for Costa Rica, Canada, and Brazil, some indicators were ranked “low” across all three countries (eg, human and/or financial resource allocation to support work).



## I. Individual PMC

In our framework, the individual level of PMC included policy “champions” internal to government as well as policy advocates in the broad stakeholder community. Building on the work of Bowen and Zwi (2005), we created five indicators of individual PMC: values (or frames); leadership; knowledge and skills; resources; and partnerships and networking.

In all three countries, individual PCM was “high” based on the first three indicators (values [or frames]; leadership; knowledge and skills) and “medium-to-high” based on the remaining two indicators (resources; partnerships and networking). For example, in the area of external partnerships, policy makers in Costa Rica experienced difficulty in establishing alliances with food industry leaders. This barrier was overcome when Costa Rican Ministry of Health officials who were responsible for nutrition monitoring and surveillance presented clear evidence of cost benefits to the flour industry. Additionally, policy makers called on support from their allies in the salt industry, where fortification had occurred earlier with successful public health outcomes.

Our findings suggest that some individual PMC indicators are more important than others. Of particular significance is the early convergence of stakeholders on the policy frame (ie, values). Members of policy networks in all three countries were strongly united by a commitment to a population health approach. Driving forces behind this convergence differed somewhat in the three countries, reflecting country-specific political cultures. For example, in Costa Rica and Brazil, international organizations such as the WHO and policy documents including the “Global Strategy on Diet, Physical Activity and Health” (WHO, 2004) were instrumental in convincing stakeholders of the importance of a focus on nutrition to improve population health.

## 2. Organization PMC

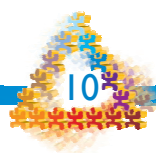
In our framework, organizations included government departments, branches, and agencies

at the State level that are responsible for the policy arena. Again, building on the work of Bowen and Zwi (2005), we created five indicators of PMC at the organization level: policy processes and procedures, partnerships, leadership, resource allocation, and knowledge and skills.

On the basis of cross-case findings, we ranked the indicators in descending order of importance: leadership; resource allocation; knowledge and skills (including change management skills); and policy processes and procedures. The fifth indicator, partnerships, varied in its significance depending on the scope of the policy. For example, in Brazil, a broad base of internal and external partnerships was critical given the sweeping nature of the food security initiative. In Costa Rica, establishing a wide range of internal and external partnerships was of lesser importance, and policy makers placed minimal emphasis on citizen engagement.

In the area of organizational PCM, we found evidence of weaknesses in all three countries (eg, shortages of human and/or financial resources; “stop-start” policy processes; and insufficient communication with stakeholders). Innovative change management strategies overseen by internal “champions” helped to mitigate these challenges, and with senior political support, the three policy processes moved forward despite the noted weaknesses. These “champions” were supported by technical experts inside and outside of the government who presented clear health benefits of the policies under consideration. The strength of the scientific evidence, combined with cost-effectiveness data, proved significant in achieving stakeholder convergence.

Internal “champions” were also adept at modifying existing policy-making practices to overcome existing or potential opposition from the stakeholder community. In Brazil, government officials convened a series of meetings to engage members of the policy community and made compromises designed to encourage industry participation. For example, they opted to label the policy as a health sector initiative, rather than as a food security initiative, in view of the lack of



consensus on a food security agenda. In Canada, officials within Health Canada created a new “corporate approach” that focused on building partnerships with key stakeholders. To this end, they established an intersectoral advisory policy group that operated on a consensus model. This process was consistent with the government’s commitment to new public management practices and contributed to the department’s credibility.

Importantly, in all three countries, governments failed to commit sufficient human and/or financial resources to their respective policy initiatives. For example, Health Canada did not receive funding for a promised national public awareness campaign on nutrition labeling. This was significant as policy makers had, from the outset, positioned nutrition labeling as a useful tool that, combined with a broader educational framework, would reduce consumer confusion when reading labels and would support informed food choices.

Additionally, policy silos emerged between Health Canada and Agriculture & Agri-Food Canada, responsible for the Canada Food Inspection Agency (CFIA). The CFIA was charged with implementing the nutrition labeling regulations. Progress was hampered by differing organizational mandates and priorities, particularly in the initial stages. Findings illuminated a dichotomy between policy formulation and other interrelated stages of the policy cycle, namely, implementation and evaluation (Sutton, 1999).

Although the CFIA officially voiced support for Health Canada’s proposal, it was repeatedly pointed out by senior bureaucrats that the CFIA required significant funding increases to enforce the regulations. Policy makers working in nonhealth sectors at the federal level stated that while Health Canada ranked nutrition labeling as a high priority in the late 1990s, *“for the CFIA it was low priority because of the potential need for resources to enforce [the regulations].”*

In both Canada and Costa Rica, “medium-to-low” PMCs on two indicators of organization

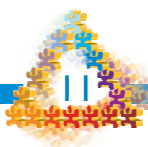
PMC (ie, resource allocation and partnerships with other key federal government departments) did not prevent the policy proposals from advancing to the decision-making stage. However, low rankings on these two indicators may prove to be significant at the implementation level. We posit that cross-case findings pertaining to organization PMC are highly significant, given the complex nutritional issues currently on the political and public “radar screens” (eg, child obesity, food insecurity, functional foods, trans fats) and the need to take action using cross-cutting policy levers.

### 3. System PMC

In our framework, system refers to the entire policy community, including government, interest groups, and the attentive public. We created four indicators of PMC at the system level, adapted from the work of Bowen and Zwi (2005), including: values (eg, support of powerful lobby groups, opinion leaders, and government); ideology (eg, epistemic communities); politics (eg, political will, advocacy strategies, the overall political agenda); and economics (eg, funding for implementation, evidence of cost-effectiveness).

Without exception, Costa Rica, Brazil, and Canada ranked “high” on the first three variables (values, ideology, and politics) at the system level, with the values dimension shifting from “medium-to-high” as the processes evolved, reflecting the excellent work done by the internal “champions.” In all countries, the fourth indicator (economics) was ranked as “medium-to-high.” Policy actors were challenged by resource shortages, especially as they planned implementation strategies (eg, enforcement of policies and procuring nutritional surveillance data necessary to monitor outcomes). As a result, government officials were forced to be very creative in securing financial support and/or in-kind donations from the stakeholder community.

We were struck by the consistency of the findings pertaining to building PMC, particularly at the individual and system levels. Without exception, the notion of population health was a



uniting value for members of the policy networks and a driving force in moving nutrition policies onto the political agendas of the three countries. However, in the case of both Canada and Brazil, high PMC at the system level was partly a reflection of compromises made by government officials during the policy formulation process (eg, Brazil's decision to work within a health frame rather than a food security frame, and Canada's decisions regarding format specifications, timelines for implementation, and exemptions to the regulations).

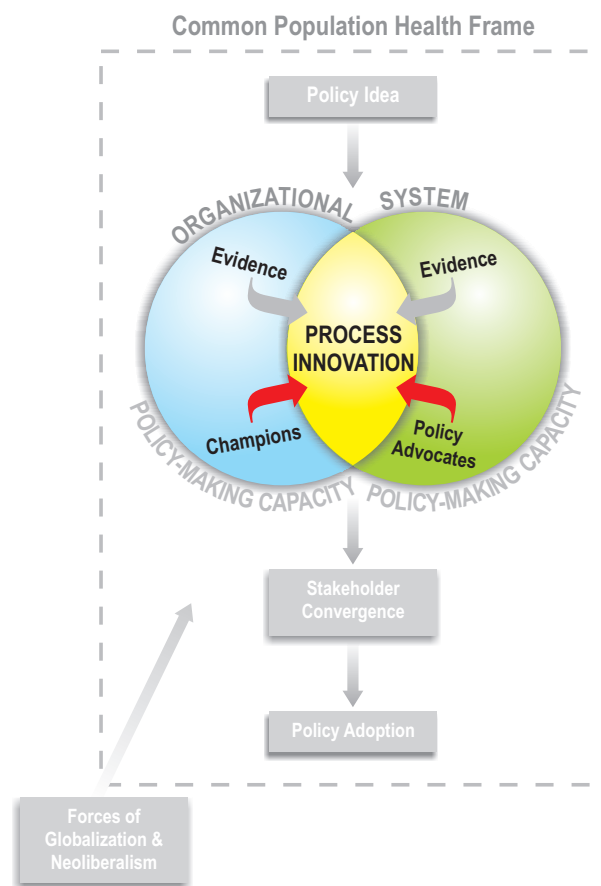
## Conclusions and Recommendations

In Figure 2, we recast findings in a diagram that captures a population health frame, levels of PMC, and important contextual factors identified through the research, such as globalization and neoliberalism. We represent individual PMC via two red arrows corresponding to “champions” (internal to government) and policy advocates (external to government). The interactive model captures the complexity of the policy-making process as well as the common ground between the three levels of PMC.

We present the following as conclusions pertaining to building PMC and recommendations for decision makers and others interested in the policy-making process.

- ▲ Consultation and collaboration through sustained intersectoral partnerships is an essential part of the policy-making process.
- ▲ Multiple forms of evidence and information sources are necessary for policy formulation, including cost-effectiveness data, industry-supported studies, and consumer research.
- ▲ Strategic national and/or international policy documents are important in charting a future course and setting an agenda for action.

**Figure 2:** Building Capacity for Policy Making at Three Levels: Individual, Organization and System

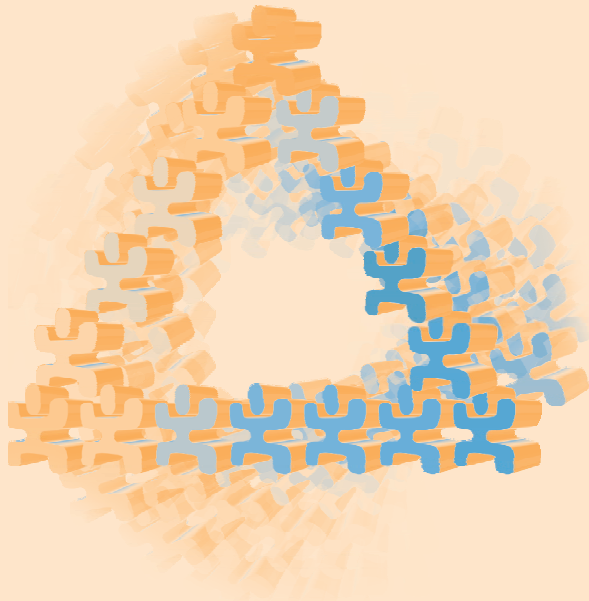


- ▲ Senior policy makers require knowledge, skills, practical tools, and resources to build PMC as well as opportunities to practice what they have learned.
- ▲ Globalization of agriculture, trade, and transnational food industries necessitates increased international cooperation and sharing of lessons learned.
- ▲ National and/or international policy dialogue offers an effective venue for addressing gaps in the evidence base while enhancing knowledge translation.

We conclude that each case study tells an important story of nutrition policy innovation in which all of the stakeholders realized at least some of their goals. However, until we examine the policy implementation process (phase two of the international research initiative), we cannot



be confident that the goals have, in fact, been successfully realized. Our recommendations for future research include a long-term, comprehensive evaluation strategy to determine whether the three policy initiatives have achieved their ultimate goal of improving population health.



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# APPENDIX

## Appendix I: Analytic Framework – Policy Formulation Stage

