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What drives political commitment for nutrition? A review and framework synthesis to inform the United Nations Decade of Action on Nutrition

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ABSTRACT

Introduction: Generating country-level political commitment will be critical to driving forward action throughout the United Nations Decade of Action on Nutrition (2016-2025). In this review of the empirical nutrition policy literature we ask: what factors generate, sustain and constrain political commitment for nutrition, how, and under what circumstances? Our aim is to inform strategic 'commitment-building' actions.

Method: We adopted a framework synthesis method and realist review protocol. An initial framework was derived from relevant theory and then populated with empirical evidence to test and modify it. Five steps were undertaken: initial theoretical framework development; search for relevant empirical literature; study selection and quality appraisal; data extraction, analysis and synthesis; and framework modification.

Results: 75 studies were included. We identified 18 factors that drive commitment, organized into five categories: actors; institutions; political and societal contexts; knowledge, evidence and framing; and capacities and resources. Irrespective of country-context, effective nutrition actor networks, strong leadership, civil society mobilization, supportive political administrations, societal change and focusing events, cohesive and resonant framing, and robust data systems and available evidence, were commitment drivers. Low and middle-income country studies also frequently reported international actors, empowered institutions, vertical coordination, and capacities and resources. In upper-middle and high-income country studies private sector interference frequently undermined commitment.

Conclusion: Political commitment is not something that simply exists or emerges accidentally; it can be created and strengthened over time through strategic action. Successfully generating commitment will likely require a 'core set' of actions with some context-dependent adaptations. Ultimately, it will necessitate strategic actions by cohesive, resourced and strongly-led nutrition actor networks that are responsive to the multi-factorial, multi-level and dynamic political systems in which they operate and attempt to influence. Accelerating the formation and effectiveness of such networks over the Nutrition Decade should be a core task for all actors involved.

List of acronyms

DFID Department for International Development

HIC High-income country

HIV/AIDS Human Immunodeficiency Virus/Acquired Immune Deficiency Syndrome

LIC Low-income country

LMIC Lower-middle income country

NCD Noncommunicable disease

NGO Non-government organization

NAN Nutrition actor network

RAMESES Realist and Meta-narrative Evidence Syntheses: Evolving Standards

UMIC Upper-middle income country

UNICEF United Nations Children's Fund

USAID United States Agency for International Development

WHO World Health Organization

What is already known about this topic?

- Global-level ambition for tackling 'malnutrition in all its forms' is strong the declaration of 2016-2025 as the United Nations Decade of Action on Nutrition (the Nutrition Decade) and the adoption of Sustainable Development Goal 2 Target 2.2 (ending all forms of malnutrition by 2030) are testament to this.
- Without political commitment at the country-level, however, the policies, programmes and resources required to reduce and eliminate malnutrition in all its forms are unlikely to be adopted, effectively implemented, and sustained.
- However, the factors that influence political commitment for nutrition are poorly understood, thus limiting the potential for strategic 'commitment-building' actions by nutrition actors over the Nutrition Decade.

What are the new findings?

- In this review of the empirical nutrition policy literature, we ask the question: what factors generate, sustain and constrain political commitment for nutrition within countries, how, and under what circumstances?
- Overall, 18 factors were identified as driving political commitment, organized into five categories: actors; institutions; political and societal contexts; knowledge, evidence and framing; and capacities and resources.
- The identified factors functioned in strongly interdependent and context-dependent ways, supporting the need to understand the drivers of political commitment within a non-linear and dynamic model of change.

How might this influence practice?

- Effective strategies for generating and sustaining commitment over the Nutrition Decade are likely to involve a set of core actions but with some context-dependent adaptations.
- Ultimately, sustained actions by cohesive, responsive and strongly-led nutrition actor networks with the strategic and organizational capacities for commitment-building are needed.
- Accelerating the development of such networks should be a core task for all actors involved, including international development partners.

INTRODUCTION

Malnutrition – "an abnormal physiological condition caused by inadequate, unbalanced or excessive consumption of macronutrients and/or micronutrients"^{1, p53} – is a leading driver of global death and disability. In 2014, 462 million adults were underweight, 2 billion micronutrient deficient, and 1.9 billion overweight or obese.² In 2016, stunting (low height for age) affected 155 million children under-five, wasting (low weight for height) 52 million, and overweight (high weight for height) a further 41 million.³ In 2011, nutrition-related factors contributed to 3.1 million or 45% of all deaths in children under-five.³ In short, malnutrition affects one in three people in the world and leaves no nation untouched.⁴

The global nutrition situation is becoming more complex. Rapid nutritional change in many countries is precipitating a 'double-burden' of malnutrition, with high rates of undernutrition co-existing with overweight, obesity and diet-related noncommunicable diseases (NCDs) within populations, households and individuals. People who are malnourished are more likely to die younger, suffer disability, live in poverty, have impaired physical and cognitive development, and reduced performance at school and work. Conversely, good nutrition provides a bedrock for the economic and social development of nations; all of the Sustainable Development Goals both influence, and are influenced by, nutrition.

Global-level ambition for tackling 'malnutrition in all its forms' is strong. The declaration of 2016-2025 as the United Nations Decade of Action on Nutrition (the Nutrition Decade) and the positioning of nutrition within Sustainable Development Goal 2 (Target 2.2 is ending all forms of malnutrition by 2030) are testament to this. These build upon the World Health Assembly's six targets on maternal, infant and young child nutrition and targets on diet-related NCDs (together: the 'global targets'). The technical solutions for achieving these goals and targets exist, including nutrition-specific and nutrition-sensitive interventions that are cost-effective and backed by evidence.⁶

Converting global ambition into on-the-ground reductions in malnutrition will, however, require more than technical know-how. It will also demand 'political commitment' for the sustained mobilization of national and sub-national political systems, policy processes, and resources for improved nutrition.^{4 7-9} The *Global Nutrition Report* and other monitoring efforts reveal the scope of this challenge – some countries are making progress towards achieving the global targets (particularly on child stunting and wasting), but the large majority are off-track due to shortfalls in governance, policy and programming responses.^{4 10} In essence, there is a significant gap between current levels of commitment and that needed to drive coherent action for achieving results.⁴

A growing body of empirical research, much of it grounded in political science, describes why and how nutrition has come to receive political commitment in some jurisdictions but has been neglected or systematically ignored in others. Important reviews of this literature exist, focusing on specific nutrition issues or country-contexts. e.g. 8 9 11 12 With an aim of informing 'commitment-building' actions over the Nutrition Decade, we extend this earlier work by reviewing and synthesising the literature relevant to all forms of malnutrition and country-contexts. We ask the question: what factors generate, sustain and constrain political commitment for nutrition within countries, how, and under what circumstances?

Defining political commitment

We adopt a definition of political commitment as "the intent and sustained actions over time by societal actors to achieve the objective of reducing and eliminating the manifestations and causes of [malnutrition]". ^{13, p282} Or more simply, it is "the will to act and keep on acting until the job is done". ^{7, pXIV} From this perspective, achieving political commitment is more than generating attention to malnutrition or getting it onto a government agenda. It further involves the mobilisation of political systems and institutions, adopting policies, allocating resources and coordinating responses for as long as necessary to ensure results. ^{7 9 13-15}

Five inter-related forms of commitment can be identified in the literature on nutrition's political economy (Table 1). 'Commitment-building', the non-linear and dynamic process by which commitment is

generated⁷, occurs through the deliberate actions of 'nutrition actor networks' – the individuals and organizations operating within a jurisdiction with a shared interest in attenuating malnutrition and who act collectively to do so.⁹ ¹⁵ Such networks may be considered 'effective' when they are capable of generating and sustaining rhetorical, institutional and operational forms of commitment, leveraging embedded commitments, and ultimately achieving commitment that is system-wide.¹⁵

Table 1. Five forms of political commitment

Form	Description
[1] Rhetorical	Statements made by members of the executive and legislative branches of government, and/or
commitment	those outside of government with whom they are closely associated (e.g. donors, civil society
	leaders) recognising malnutrition as a serious problem, and that concerted action is both needed
	and forthcoming. ⁷ ¹⁵⁻¹⁸ A rhetorical commitment may be a 'symbolic gesture' only, especially
	when the political costs of inaction are low. Or, when genuine, such commitments may reach a
	government's 'decision-agenda' and be converted into [2] via directives for governmental and
FA1 Y	societal action.
[2] Institutional	The conversion of [1] into substantive policy infrastructure including institutions responsible
commitment	for coordinating actions, the adoption of enabling legislation, policies and policy instruments
	commensurate with the severity of the problem, 16 18 and the commitment of mid-level
	bureaucrats responsible for coordinating action. 7 18 19 Institutions and policies can, however, be
	under-powered, inadequately-resourced and have limited impact. This can trap nutrition in a
	'low-priority' cycle as "lack of commitment breeds lack of impact breeds lack of commitment". 7, p7
[2] Operational	The conversion of [1] + [2] into on-the-ground actions including the sustained allocation of
[3] Operational commitment	human, technical and financial resources, the effective coordination of all actors involved along
Commitment	national to sub-national implementation pathways, and the commitment of street-level managers
	and implementation teams. ¹⁶ ¹⁸ ²⁰ Limited operational commitment on sheet-level managers
	failure, thereby undermining sustained commitment and further trapping nutrition in a low-
	priority cycle. ⁷
[4] Embedded	When commitment to address issues indirectly related to nutrition (e.g. economic development,
commitment	social protection. hunger reduction initiatives) inadvertently achieves positive nutrition
	outcomes, referred to as "nutrition success without nutrition-specific action". ²¹ , p ²⁶ This can
	create opportunities for nutrition actors when they are capable of sensitising or positioning
	nutrition within these broader or related policy agendas, thus further catalysing the commitment-
	building process and forms [1-3]. ²⁰ ²¹
[5] System-wide	The achievement of $[1] + [2] + [3] + [4]$ involving all actors operating within a nutrition system
commitment	including communities, families and individual citizens. ^{7 15} When achieved, system-wide
	commitment can create a powerful reinforcing feedback-loop that institutionalises and sustains
	long-term policy and programme responses. To be effective efforts must be sustained and re-
	calibrated in response to emerging opposition and demands, changing conditions and
	implementation challenges. ^{7 13 15}

METHODS

Review method

We made several considerations in selecting the review method: the complex nature of political systems, the theoretically guided qualitative case study designs typically used in food and nutrition political analyses, and our aim of describing the multi-factorial, inter-dependent and context-dependent drivers of political commitment rather than a simple description of listed variables. On this basis we adopted a framework synthesis method^{22 23} suitable for reviewing qualitative research on applied policy topics, and adapted the RAMESES standards for reporting purposes.^{24 25}

This involved formulating a theoretical framework of factors influencing political commitment and modifying it in response to extracted data to result in a revised framework including modified and new factors. We proceeded via five steps: i) Development of a framework integrating several 'middle-range theories' on the determinants of political commitment; ii) A search for relevant empirical literature; iii) Study selection and quality appraisal; iv) Extracting, analysing and synthesising data; and v) Populating and modifying the framework. A review protocol was registered (PROSPERO 2016:CRD42016046015).

Initial theoretical framework development

A scoping review of scholarly and grey literature was undertaken in July 2016 to identify relevant theories, to explicate the phenomena under study and identify search terms. To guide our initial conceptualisation and to guide the analysis we drew upon three complementary 'middle-range' frameworks often applied in nutrition policy research: Kingdon's multiple streams theory, ¹⁷ Shiffman and Smith's health priority-setting framework, ¹⁴ and Heaver's work on political commitment for nutrition. ⁷ These were integrated into an initial theoretical framework (Supplementary Text 1).

Search for relevant empirical literature

To optimise search strings, we undertook preliminary searches of the PubMed, Scopus, ProQuest and Web of Science databases using combinations of terms and database parameters (Table 2). These databases were selected for their relevance and comprehensiveness after consultation with two librarians trained in systematic search. A search diary was kept to record progress and modifications to the protocol (Supplementary Text 2). We conducted a search for primary literature between August and October 2016. Acknowledging the large 'practice-orientated' grey literature on nutrition policy we also searched the websites of international organizations with a mandate to address malnutrition in October 2016 (Table 2). To capture studies missed in the initial search, additional searches were conducted in February 2017.

Table 2. Databases and websites searched, search terms, and inclusion / exclusion criteria

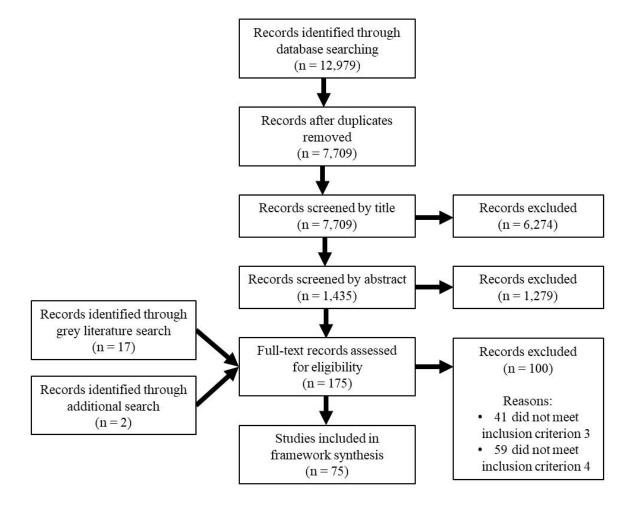
Search	Databases / institutional websites Search terms	
Scholarly literature	PubMed, Scopus, ProQuest, Web of Science Nutrition-related: diet*, food*, hunge micronutrient deficienc*, nourish *nutrition*, obesity, overweight, stunting underweight, wasting	
Grey literature	Eldis; Food & Agricultural Organization of the United Nations; Institute for Development Studies; International Food Policy Research Institute; International Fund for Agricultural Development; Oxfam International; Save the Children; Scaling-up Nutrition; United Nations Children's Fund; United Nations Standing Committee on Nutrition; World Bank; World Food Programme; World Health Organization.	
Inclusion and exclu	on criteria	
Studies wer included if:	Published after 1990 in English. Published in a peer-reviewed journal or by an official organization or non-government organization with a mandate to address malnutrition. Identified and described factors shaping political commitment for nutrition at national and/or sub-national levels. Involved an empirical analysis with clearly described aims, explicit use of theory or description of underlying assumptions, a clear study design and methodology including data sources, coherent statement of findings and justifiable conclusions.	
Studies wer excluded if:	 Non-empirical (e.g. commentaries, conceptual frameworks, calls to action). Focused on specific institutional (e.g. school, prisons and workplaces) or clinical policy-settings (i.e. not at jurisdictional level). 	

^{*} Truncated to capture all variations of the word (e.g. *nutrition* captures mal-, over- and under-nutrition)

Selecting studies and quality appraisal

References for all studies were entered into an EndNote library. Studies were selected against the inclusion and exclusion criteria in Table 2. Study quality was appraised by relevance to the review aim (inclusion criterion three) and robustness (criterion four). A diagram of the search process is given in Figure 1. To check for inter-assessor reliability PB and KW independently screened a sample of records by title, abstract, and full text (Supplementary Text 2). The final list of included articles was approved by all authors.

Figure 1. The search process



Data extraction, analysis and synthesis

Data were extracted in two steps. First, PB read all full texts and extracted basic data into an *Excel* (Microsoft) spreadsheet: study characteristics (authors, year, title, aims/objectives, policy focus, theory used, study design, methods, data sources, funding source); setting (focal nutrition issue, geographical level, jurisdiction name, income-level); outcomes (study conclusions/key findings, commitment outcome). Second, studies were coded in *ATLAS.ti* (Scientific Software GmbH) using a coding schema derived from the initial framework and refined abductively using constant comparative analysis whereby the coded concepts were confirmed, integrated, modified and/or added to through iterations of data analysis.²⁶

Data were then synthesised. First, text associated with each code was read *in-situ* by PB and summarised, including: i) a definition of each factor, identified as *what* influenced commitment; ii) the mechanism(s) associated with it, identified as underlying entities, structures or processes that transmitted a causal force between the factor and political commitment (either stated in the study or inferred)²⁷; and, iii) co-factors that amplified, diminished, and/or sustained the mechanism. On this basis, we defined 'context' as 'underlying social, economic and physical phenomena' influencing how the mechanism functioned to generate an outcome.²⁸ Second, any co-factors missed in the first step were identified using the *ATLAS.ti* code co-occurrence tool.

Populating and modifying the framework

The synthesised data corresponding to modified or new factors were populated into the thematic categories of the framework to generate the final version.²² All authors reviewed iterations of the results and final tables.

RESULTS

Description of included studies

A total of 75 studies were included (Supplementary Text 3). There was an upsurge in publications per year in the 2006-2017 period, likely reflecting increased attention to nutrition's political economy. By World Bank country income status, studies spanned 31 (38%) high-income (HICs), 13 (16%) upper-middle-income (UMICs), 22 (27%) lower-middle (LMICs), and 15 (18%) low-income (LICs) countries. By issue, 6 (8%) focused on food security, 22 (30%) on general malnutrition, 2 (3%) on micronutrient deficiencies, 28 (38%) on overweight/obesity and diet-related NCDs, and 16 (22%) on undernutrition. Overweight/obesity and diet-related NCDs was the predominant focus in HICs and UMICs studies, and undernutrition in LMICs and LICs. Only one study explicitly focused on the double-burden of malnutrition.

By jurisdictional level 51 (68%) involved national jurisdictions, 17 (23%) sub-national (region/province/state), and 4 (5%) sub-national (local/municipal). A small number involved multi-level jurisdictions; 2 (3%) national and sub-national (regional), and 1 (1%) national and supra-national. 25 frameworks, theories and models were identified across the included studies. 10 (14%) used the multiple streams theory, 9 (12%) a governance framework, 6 (8%) framing theory, 6 (8%) Shiffman and Smith's framework, 5 (7%) Clark's policy science framework, 4 (5%) the advocacy coalition framework, and 4 (5%) the enabling environments for nutrition framework (6%). 24 (32%) adopted a theoretically pluralistic approach that integrated two or more theories.

Factors generating, sustaining and constraining political commitment

As described in Table 3, a total of 18 factors were identified as driving commitment, organized into five themes: actors; institutions; political and societal contexts; knowledge evidence and framing; and capacities and resources. These were conceptualised as increasing or decreasing the 'probability' of political commitment, rather than in terms of 'necessity' or 'sufficiency'. A more elaborate representation of these factors is given in Tables S4.1-4.5 (Supplementary Text 4). As demonstrated by the co-factors column in these tables, the determinants of commitment identified were dynamic, strongly interdependent and context-dependent.

Table 3. Factors identified as driving political commitment for nutrition

Category	Factor and description
Actors	(1) Nutrition actor network (NAN) effectiveness: Effectiveness of NANs, the individuals and organizations operating within a given jurisdiction who
	shared common principles, causal beliefs, and/or interest in tackling malnutrition and who acted collectively to do so. 14 17 29
	(2) Strength of leadership: Presence of committed and politically savvy individuals, within or outside of government, recognised as strong champions for
	nutrition. ^{7 14 17 30}
	(3) Civil society mobilization: Extent to which civil society groups mobilized to address malnutrition, including non-government organizations and social
	movements collectively representing the interests of citizens. ^{7 14}
	(4) Supportive international actors: Degree to which actors with an international scope of operations and/or membership initiated, championed and/or
	supported nutrition policy and programming responses. ^{14 31}
	(5) Private sector interference: Degree to which mobilized private interest groups undermined effective nutrition policy responses, including food
	producers, retailers, marketers and their representative peak bodies. 32 33
Institutions	(6) Strength of institutions: Extent to which coordinating agencies and institutional systems mandated to address malnutrition were empowered to
	effectively coordinate multi-sector/-level responses and advocate for sustained attention and resources. ^{7 14 21 34}
	(7) Effective vertical coordination: Degree to which nutrition policies were effectively coordinated, implemented and monitored across levels of
	governance, particularly regarding the incentives of sub-national actors to adopt, progress and benefit from central government policies. 20 35-37
	(8) Legislative, regulatory and policy frameworks: Degree to which national nutrition policies, operational plans and enabling legislation were well-
D 11.1 1 1 1 1 1	designed and enacted, and/or the alignment of nutrition objectives with broader policy agendas and regulatory frameworks. 38-40
Political and societal	(9) Supportive political administrations: Degree to which members of the executive (e.g. head of state, ministers), legislative (e.g. parliamentarians), and
contexts	administrative (e.g. agency heads, senior officials) branches of government initiated and championed nutrition responses. 12 20 41
	(10) Societal conditions and focusing events: Extent to which changing societal conditions (long-duration phenomena) or focusing events (short-term
	processes) focused attention onto nutrition or closely related issues and presented opportunities or impediments to commitment-building. 14 17 31 42 43
	(11) Ideology and institutional norms: Extent to which entrenched belief systems and practices predominant within political systems, policy-making
77 1 1 '1	institutions, and/or in society-at-large, negatively skewed perceptions about malnutrition problems and undermined effective policy responses. 15 17 29 32 44 45
Knowledge, evidence	(12) Credible indicators and data systems: Availability of credible indicators and high-quality data systems for monitoring nutrition problems, informing
and framing	policy design, tracking progress and empowering accountability systems. ⁷ 14 15 20 21
	(13) Evidence: Extent to which robust evidence on the causes, manifestations and consequences of malnutrition and the efficacy and cost-effectiveness of
	interventions was available, clearly communicated and accepted. 14 32 46
	(14) Internal frame alignment: Degree to which NANs were aligned around a common interpretation and narrative of a given malnutrition problem
	including its definition, magnitude, causes and solutions for resolving it. 14 29 31 37 42
	(15) External frame resonance: Degree to which NANs publicly portrayed (i.e. framed) nutrition problems and solutions in ways that resonated with and
Canacitica and	motivated action by external audiences, and countered the frames deployed by opponents. 14 17 20 31 32 42
Capacities and	(16) Strategic capacities: Degree to which NAN members possessed 'soft-power' skills including the capacity to generate consensus, resolve conflicts, respond to recurring opportunities and challenges, build strategic alliances, undertake strategic communications and related tasks. ^{7 42}
resources	
	(17) Organizational capacities: Degree to which NAN members possessed the technical knowledge and skills, administrative systems, and human resources required to generate commitment, including through the effective management of nutrition policy and programming responses. ^{7 15 18 42}
	(18) Financial resources: Degree to which nutrition budgetary commitments and financing systems incentivised multi-sector/-level coordination, ensured
	successful policy implementation, and created ownership and entitlements among political elites, policy-makers, citizens and other stakeholders. ^{7 20}

Actors

Irrespective of country context effective nutrition actor networks (NANs) (Factor 1) generated commitment through *inter alia* advocacy and awareness-raising, framing nutrition problems and solutions (i.e. norm promotion), generating data and evidence, coordinating policy development, implementation and monitoring activities, building capacities and mobilizing resources. ^{18 29-32 37 41-43 47-61} Such networks varied widely in structure (formal vs. informal), maturity (nascent vs highly evolved) and membership composition including parliamentarians, bureaucrats, academics, international agencies and civil society representatives. ^{18 29-32 37 41-43 47-61} Their effectiveness was enhanced in the context of high cohesion among members^{37 41 43 54-61}, strong leadership⁵⁸⁻⁶⁰, and when possessing strategic and organizational capacities. ^{29 37 44 51 57 62 63} Conflict and fragmentation within NANs was, however, frequently reported resulting from many topics of disagreement. ^{12 16 29 32 47 48 50 54}

Nutrition leaders (Factor 2), including those within and outside of government enabled commitment in many studies through establishing, unifying and mobilizing NANs, championing policy ideas and engaging with decision-makers. ¹⁵ ¹⁸ ²⁰ ²¹ ³⁷ ⁴³ ⁵⁰ ⁵⁵ ⁵⁸ ⁶⁰ ⁶⁴ ⁶⁹ They included advocates promoting external attention to nutrition, policy entrepreneurs (e.g. who 'softened-up' technical communities to political realities, built consensus and advocated policy ideas), and high-level political champions. ¹² ¹⁸ ³⁰ ³¹ ³⁴ ³⁸ ⁴⁴ ⁵⁴ ⁵⁵ ⁵⁷ ⁵⁸ ⁶⁰ ⁶⁰ ⁶² ⁶⁴ ⁶⁷ ⁶⁹ ⁷² Their leadership was enhanced when possessing certain strategic capacities (e.g. emotional intelligence, management, communication, negotiation and conflict management skills) ¹⁸ ³⁰ ⁴² ⁵⁰ ⁵⁵ ⁵⁷ ⁵⁹ ⁶⁰ ⁶⁴ ⁶⁵, they had the support of high-level political champions ³⁰ ⁶⁴ ⁶⁵, and when elected or appointed into positions of authority (e.g. as legislators or high-level bureaucrats). ¹⁸ ²¹ ⁵⁰ ⁵⁵ ⁵⁷ ⁵⁹ ⁶⁰ ⁶⁷ ⁷³

The mobilization of civil society groups (Factor 3), including a diversity of international and national non-governmental organizations (NGOs) and social movements (e.g. health-orientated, disease-specific, faith-based, consumer-focused), was often integral to NAN formation, development and impact. Groups varied in their expertise, available resources and functional roles. ²⁰ ²¹ ³⁰ ³¹ ³⁷ ⁴¹ ⁴³ ⁵⁹ ⁶⁰ ⁷⁰ ⁷⁴ ⁷⁷ Their activities included advocacy, awareness-raising and coalition-building, acting as an accountability mechanism (e.g. by monitoring and reporting on government and other stakeholder activities), giving voice to the politically marginalised, delivering on-the-ground services, and informing policy development, monitoring and calibration. ²⁰ ²¹ ³⁰ ³¹ ³⁷ ⁴¹ ⁻⁴³ ⁵⁹ ⁶⁰ ⁷⁰ ⁷⁴ ⁻⁷⁷ Civil society impact was enhanced when supported by the media ³¹ ⁶⁵ and international actors ²¹ ³⁷ ⁷⁸, and when inclusive governance arrangements linked policy-makers with civil society groups and policy beneficiaries. ²⁰ ²¹ ³⁹ ⁴¹ ⁴⁴ ⁵⁶ ⁵⁹ ⁷²

In several LIC and MIC studies, supportive international actors (Factor 4) enabled commitment by mobilizing resources for policy, programming and capacity-building 20 37 38 44 65 71 79, providing technical assistance and legitimacy to policy initiatives 12 30 34 57 58, and by advocating to governments. 21 29 44 57 58 They included multi-lateral organizations (e.g. WHO, UNICEF, World Bank), donor agencies (e.g. USAID, DFID) and global nutrition initiatives (e.g. Scaling Up Nutrition). 15 21 38 53 56-58 65 67 71 75 In some cases policy and programming was almost entirely donor-driven. 38 71 79 The role of international actors was weakened when their actions were misaligned with government priorities 18 20 29 42, when the absence of coherent government policies, coordinating structures and accountability mechanisms encouraged donors to 'go it alone' 52 78, and when recipient governments became over-dependent on donor financing. 53 54 71

In many MIC and HIC studies, private sector interference (Factor 5) impeded commitment for food regulations targeting obesity prevention by *inter alia* undermining policy debates (e.g. by emphasising individual or parental responsibility, disputing evidence, intervention as 'nanny-statist'), pre-emptively adopting self-regulation (i.e. policy substitution), and direct lobbying of policy-makers. ^{19 32 33 46 49 50 80-84} This was enhanced in the context of a neoliberal ideology ^{19 32 40 49 85 86} including a shift towards hybrid (i.e. public-private) governance arrangements that expanded private-interest influence in public policy ¹⁹ ^{32 49 83 85 87}, the food industry's 'productivist power' as suppliers of jobs and tax revenue^{21 32 49}, and greater

international capital mobility (i.e. via trade liberalization) allowing transnational corporations to punish or reward governments for their policy decisions.^{66 83} In some LIC and MIC studies, agricultural subsidies, tax concessions and 'pork-barrelling' may have created powerful private-interest constituencies resisting nutrition-sensitive agriculture and food distribution policy change.^{20 31 38 78 88}

Institutions

Tackling malnutrition requires coordinated action and commitment within and across multiple sectors (horizontal coordination) and levels (vertical coordination) of governance. The complex institutional arrangements involved, the absence of 'institutional ownership' for nutrition, and institutional failure often impeded this. ¹⁵ ¹⁸ ²⁰ ³⁰ ³¹ ³⁴ ³⁴ ⁴⁵ ⁵⁹ ⁷⁵ The establishment of empowered coordinating agencies and institutional systems with a mandate to address malnutrition (Factor 6) was important in overcoming these challenges through *inter alia* providing structures for convening stakeholders, coordinating multisector/-level policy development, implementation and monitoring activities, and mobilizing human, technical and financial resources. ²⁰ ²⁹ ³¹ ³⁴ ⁴¹ ⁵⁴ ⁵⁷ ⁵⁸ ⁶⁵ This often centrally involved the health and agricultural sectors, but also *inter alia* education, gender, labour, finance, economic development, industry, water and sanitation, social protection and trade. ¹⁸ ²⁰ ³⁴ ³⁵ ³⁸ ⁴¹ ⁵⁸ ⁶³ ⁶⁹ ⁷⁵ ⁷⁷ ⁸⁹ ⁹⁰

Coordinating agencies were typically located within supra-sectoral agencies (e.g. office of the prime minister) or line agencies (e.g. ministry of health, agriculture)^{21 31 57 58}, and embedded within wider multi-sector/-level institutional systems with delineated roles and responsibilities.^{18 21 41 57 59} Agencies were more often effective when positioned supra-sectorally and possessing sufficient capacities, resources and leadership^{12 18 21 65 75 77}, and when institutional systems had strong multi-sector/-level cooperation incentives (e.g. enabling legislation, policies and plans, shared and sector-specific goals, performance measures, and performance and/or results based budgeting systems).^{21 38 39 57 75} Institutional failure resulted from *inter alia* insufficient authority, capacities and resources (often when located within politically weak line ministries)^{20 21 31 38 53 57 77 78}, an over-focus on technical or implementation activities to the neglect of advocacy^{18 21 34}, and inter-organizational competition.^{18 34 53}

Vertical coordination presented a significant challenge given the many actors involved in policy and programming activities within and across levels of governance. ¹² ¹⁸ ²⁰ ²⁹ ³² ³⁵⁻³⁸ ⁵³ ⁷¹ ⁷⁷ ⁷⁹ ⁸⁰ ⁹¹ Effective vertical coordination (Factor 7) was important for incentivising actions, building ownership, and driving coordinated action along national to sub-national 'implementation pathways'. ²⁰ ²¹ ³⁵⁻³⁷ ³⁹ ⁷¹ This was enhanced through strong cooperation incentives (e.g. legislation requiring multi-level cooperation, resource transfers, and performance and/or results based budgeting) ²⁰ ²¹ ³⁹, and sub-national institutional structures with sufficient capacities and resources. ²⁰ ²¹ ³⁷ ⁷¹ Decentralisation processes underway in many countries increased the power of sub-national stakeholders, making their involvement in centralised policy processes critical ²⁰ ²¹ ²⁹ ³⁴ ⁶² ⁷¹, and their exclusion detrimental. ²⁰ ³⁸ ⁵² ⁷¹ ⁷⁵ In some cases, decentralisation also undermined the authority of centralised coordinating agencies. ²⁹ ³⁴ ⁵³ ⁵⁷ ⁶² ⁷¹

The development and adoption of national nutrition policies, operational plans and enabling legislation (Factor 8) enabled commitment by demonstrating commitments to which governments could be held accountable, enabling beliefs on the need for coordinated action within government, and by providing a framework for action.^{15 21 38 39 60 71 75 77} Commitment was further enhanced when nutrition was positioned within broader national development plans, social welfare reforms and/or poverty reduction strategies^{18 21 37 59 66 74}, when global-level policies and/or commitments compelled national governments to initiate responses^{20 56 57 67 71 92}, and when policies had clear numerical commitments that enhanced accountability.^{20 38 93} It was diminished when nutrition was excluded or marginalised from broader policy agendas^{34 38 94}, and when there was limited capacity to achieve consensus among stakeholders during policy processes.^{15 42 51 72}

Political and societal contexts

Political administrations, including the executive, legislative and administrative branches of government were often the primary power structures shaping nutrition responses at all levels. Supportive political administrations (Factor 9) enabled commitment by articulating policy debates, championing policy initiatives, facilitating inclusive policy processes (e.g. public consultations), drafting policy and legislation, providing institutional memory, and enhancing accountability through oversight of policy initiatives, agencies and expenditures. Page 12 20 37 41 59 This was more likely with the election or electoral continuity of governments with strong social welfare and anti-poverty agendas 12 18 20 21 31 39 52 56 59 65 66, when actions were taken to build non-partisan (i.e. multi-party or multi-faction) coalitions for nutrition, and when parliamentarians were actively involved in policy processes. 20 41 57

Unsupportive political administrations were frequently reported.^{20 29 37 38 52 59 65 77 86 94} In several cases rhetorical commitments by members of the executive branch were not converted into directives for legislative and administrative enactment.^{15 18 20 21 78} This was more likely in the context of weak electoral demand and/or civil society pressure (i.e. reducing the political costs of inaction)^{20 29 38 52 59 65 77 94}, the low-level visibility of nutrition and poor nutritional literacy among parliamentarians, administrators and citizens^{15 52 53 62 71 74}, when attention to nutrition was eclipsed by more tangible 'vote-winning' issues^{18 34 38 52 54 56 57 62 71 75}, and in highly partisan, fragmented or unstable political environments.^{52 91} In some HIC studies commitment for food regulations targeting obesity prevention was undermined by the election of, or congressional control by, more right-wing (e.g. liberal-conservative) governments.^{32 49 50 68}

Long-term changes in societal conditions and short-term focusing events (Factor 11) presented opportunities or challenges for generating commitment by influencing many aspects of government policy agendas and by focusing public and political attention directly onto or away from nutrition and/or closely-related issues. ³¹ ⁴² ⁴³ ⁷² Examples of these are given in Table 4. Some focusing events (e.g. famines) were detrimental when they focused attention onto and institutionalised food production and distribution responses at the expense of broader (i.e. nutrition-sensitive) and longer-term responses to undernutrition⁴². Changing societal conditions and focusing events were more likely to advance commitment when NANs had sufficient foresight, leadership, and capacities to take advantage of emerging opportunities or mitigate threats. ⁴² ⁷²

Table 4. Changing societal conditions and focusing events as commitment-building opportunities or challenges

Туре	Identified examples presenting opportunities (\uparrow) or challenges (\downarrow)
	↑ Long-term trends in population health, food systems change and nutrition
duration phenomena that	status (e.g. epidemiological transition, nutrition transition) ^{32 51 67} ; ↑ Transition to
	democracy enabling more socially-orientated policies ^{59 74} ; † Economic growth
	enabling greater resources for nutrition budgetary commitments ^{31 65} . ↓ Sustained
were directly or indirectly	conflict/insecurity; ⁵³ ⁵⁸ ⁷⁸ ⁹² ⁹⁵ ↓ Weak government revenue-raising capacity
related to nutrition ^{42 43} .	constraining nutrition budgetary commitments ²⁰ 31 68 76 78; ↓ Widespread
	corruption and embezzlement ^{20 31 76} ; ↓ Economic downturn/austerity reducing
	support for food regulations targeting obesity prevention due to perceived
	costs/impacts on food industry. 32 43 48 68
Focusing events: Short-	† Famines, natural disasters, political upheavals and economic crises 15 42 53 65 71
	⁷² 92; ↑ High-profile and/or consistent media coverage 12 19 31 46 50 55 65 71 76 77 87; ↑↓
•	Political developments including changes within the executive, legislative
	and/or administrative branches of government, government planning cycles,
closely related issues ^{31 42} .	high-level speeches/debates, and ratifying international agreements ¹² ¹⁴ ¹⁷ ³¹ ³² ³⁸
	⁴¹ 66 67; ↑ Emergence of broader policy discourses that nutrition actors could
	sensitise (e.g. HIV/AIDS, Millennium Development Goal implementation,
	primary health care, poverty reduction) ^{42 65 69} ; ↑ Direct actions of nutrition actors
	(e.g. high-profile events, publishing reports). 15 31 57 ↓ Famines, natural disasters,
	political upheavals, economic downturn and other crises when institutionalising
	food distribution responses that excluded nutrition ⁴² .

Certain belief systems (Factor 12) entrenched within political systems, policy-making institutions, and/or in society-at-large were found to narrow or skew perceptions about the scale, scope and nature of nutrition problems thereby impeding commitment for more balanced policy responses addressing the wider determinants of malnutrition. Three were most evident as described in Table 5. In primarily HIC studies a 'neoliberal ideology' was found to skew overweight/obesity responses towards behavioural-lifestyle and market-driven (i.e. industry-led) approaches with a limited role for government and legislative intervention. Page 40 43 49 66 85 86 In several LIC and MICs a 'food-centric' belief system was found to orientate policy responses towards agricultural production, food distribution and hunger reduction to the exclusion of nutrition. A 'nutri-centric' belief system skewed undernutrition responses towards nutrition-specific and/or curative/biomedical interventions to the neglect of nutrition-sensitive ones. A 'nutri-centric' belief system skewed undernutrition-sensitive ones.

Table 5. Prominent belief systems skewing nutrition responses and undermining commitment

Belief system	Reinforcing or associated factors
market freedom, minimal government intervention, devolved governance including 'self-governance' by the individual, and an expanded role for market actors in all spheres of political, economic and social activity. 19 85	Behavioural-lifestyle approaches to nutrition that download responsibility onto individuals or parents rather than powerful governments and/or food industry actors ^{19 32 43 49 66 85} ; An expanded role for the private sector in policy and governance ^{19 32 49 85} ; Belief that government should have no or only a minimal role in regulating free markets and enterprise ^{19 32 40 49 86} ; Deregulation agendas within government including regulatory impact assessments (i.e. assessing new regulatory proposals for costs to business) with stringent evidential requirements. ^{40 84}
nutrient-centric view of nutrition emphasising nutrition-specific or reductionist interventions to the neglect of	Placement of nutrition within ministries of health resulting in an over- emphasis on nutrition-specific programming ^{20 38 52 58 71} ; Prevailing narratives at international level (i.e. nutrition faddism) narrowing the scope of national nutrition responses (e.g. over-emphasis on micronutrients) ⁴² ; Civil society groups becoming fixated on single issues and presenting ideological resistant to alternatives ^{31 52} ; Generally, an overly-technical or reductionist approach to nutrition disconnected from the "messiness of real decision-making", particularly when nutrition actors failed to manage conflicts arising from divergent values, perspectives or interests of a non-technical nature. ^{12 18 31 51}
"malnutrition with lack of food". 42, pS62 Also: the conflation of food security with nutrition security or the conflation of a	Focusing events (e.g. drought, famine, economic crises) that stimulated and institutionalised food distribution and emergency food responses at the expense of longer-term 'development nutrition' ^{20 30} ³⁸ ; When food distribution and/or food pricing was an entrenched political issue (i.e. when perceived as a 'vote-winner' or food insecurity as driving political instability), and when food distribution schemes were highly institutionalised and resistant to change (i.e. path dependent) ^{31 42 52 53 59 78} ; When food systems were orientated towards the production and distribution of single commodities (e.g. rice in Bangladesh, maize in Zambia) thus creating powerful electoral constituencies resisting nutrition-sensitive policy change ^{20 38 78} ; Overemphasis on agricultural commercialisation, cash-cropping and/or export markets (i.e. productivism) to the neglect of local social considerations and nutritional needs. ^{36 38}

Knowledge, evidence and framing

Irrespective of issue or country context the availability of credible indicators and data systems (Factor 12) was critical to enabling commitment by informing problem identification (i.e. demonstrating the changing prevalence and distribution of malnutrition), policy development, monitoring and calibration activities, the development of internal frame alignment (i.e. a shared discourse) within NANs, and as a foundation for effective financing and accountability systems. 12 15 20 21 30-32 37 41 42 46 54 57 58 64 65 67 69 74 76 80

Data demonstrating 'policy success' enabled successful advocacy efforts for sustaining long-term commitment. 18 54 58 62 91 Insufficient data and weak data systems were, however, reported in many studies 30 31 34 35 38 42 47 51 52 54 71 86 87 93 , often resulting from the limited capacities, resources and incentives of nutrition actors to collect, analyse and disseminate data. 20 38 54 56 77 79 94

Evidence demonstrating the causes and consequences of malnutrition and the efficacy and cost-effectiveness of interventions (Factor 13), helped to support effective advocacy and policy activities when available, clearly communicated and accepted. ²¹ ³⁹ ⁴¹ ⁴³ ⁵⁷ ⁵⁸ ⁶¹ ⁷⁰ ⁷⁴ This was more likely when evidence was communicated via 'knowledge-brokers' ³⁰ ⁵⁶ ⁶⁶ ⁷⁷ ⁹⁶ in language policy-makers understand³⁸ ⁷⁷ ⁹⁶, by using communicative devices (e.g. country profiles, short briefs, nutrition maps)²¹ ⁷⁷, and when authoritative bodies were commissioned to gather, integrate and report evidence. ³⁹ ⁴⁷ ⁶¹ The perception that evidence was lacking, inconsistent or unconvincing was frequently reported. ¹² ³¹ ³² ³⁸ ⁴⁰ ⁴⁶ ⁴⁷ ⁵¹ ⁵⁴ ⁶⁶ ⁷¹ ⁷⁷ ⁸⁰ ⁸⁴ ⁸⁷ ⁹⁶ Although in some studies a strong international evidence-base supported country-level activities ³⁰ ⁴⁷ ⁵⁴ ⁵⁶ ⁵⁷ ⁷⁴, many reported an absence of locally-relevant evidence and/or the perception that international/national evidence was inapplicable to national/sub-national contexts. ³⁰ ³¹ ³⁵ ⁴² ⁴⁷ ⁵¹ ⁵⁴ ⁷¹ ⁸⁶ ⁸⁷ Higher evidential requirements were required to inform policy decisions when issues were strongly contested, as in the case of food regulations targeting obesity prevention. ³² ⁴⁶ ⁴⁹ ⁸⁷

NANs that were unified around a common problem definition, causal interpretation and set of proposed solutions (Factor 14) were more likely to overcome ideological differences, appease powerful 'veto players' and undertake effective collective action. ¹⁵ ²⁹ ³⁷ ³⁹ ⁴¹ ⁴² ⁵⁴ ⁵⁷ ⁶⁰ ⁶⁵ ⁶⁹ ⁷⁷ This was more likely when NANs had established structures (e.g. governance bodies, conferences, workshops, informal networking events) for sharing information, recruiting and socializing new members, building consensus and managing conflicts ²⁰ ²⁹ ³⁷ ³⁹ ⁴⁴ ⁵¹ ⁵⁷ ⁶² ⁶³ ⁶⁵, leadership ²⁰ ⁵¹ ⁵⁸, strategic capacities (i.e. soft skills) for building consensus and managing conflicts ⁴² ⁵¹ ⁵⁴ ⁵⁸, and credible data, evidence and/or a shared causal framework (e.g. UNICEF nutrition framework) to support a unifying discourse. ²⁰ ⁵¹ ⁵⁸ The failure to achieve this 'internal frame alignment' was reported in many cases ¹² ²¹ ³¹ ³² ³⁸ ⁵⁰ ⁵³ ⁵⁸ ⁶² ⁶⁶ ⁷⁶ ⁷⁸ ⁸⁶ ⁸⁸ ⁹⁷ and resulted more often from normative conflicts (e.g. divergent interests, organizational mandates, administrative systems, or professional cultures) rather than technical ones. ¹⁸ ²⁹ ³¹ ⁴² ⁵¹ ⁶² ⁷² Although there were many topics of disagreement within NANs ²⁰ ⁴² ⁵¹, distrust and disagreement regarding the private sector's role in nutrition policy was most common. ¹² ³⁰ ³¹ ⁴³ ⁵¹ ⁵⁴ ⁸² ⁹⁷

Certain public portrayals (i.e. frames) used by nutrition actors to attribute causality, responsibility, severity, tractability and benefit to an issue were found to resonate strongly with external audiences and thus enable commitment.^{14 17 32 35} Common frames identified are described in Table 6. This 'external frame resonance' (Factor 14) was more likely when messages were aligned with the underlying values and beliefs of policy decision-makers^{7 32 44 57 81} including their perceptions of technical and political feasibility^{12 18 31 44}, when NANs argued behind closed-doors and spoke with a 'common voice'^{20 42 57}, and when messages were strategically tailored to align with the priorities, interests, and needs of target audiences.^{7 63 81 86 96} 'Hooking' nutrition onto high priority non-nutrition issues (i.e. frame expansion) was also found to successfully enable 'nutrition success without nutrition commitment' by sensitising broader policy agendas (e.g. national development agendas, poverty reduction initiatives, school feeding programmes) to nutrition objectives.^{20 21 41 42 62 69}

Table 6. Frames identified in the literature

Type		Identified examples
Frames		An economic rationale for intervention including costs to national health systems,
attention		economic development and productivity ^{32 38 40 71 97} ; Vulnerability of children to
enabling o	commitment	malnutrition ³¹ ³² ³⁹ ⁸¹ ; The human right to food and health ¹² ²⁰ ³¹ ⁵⁹ ⁶⁵ ; International
		comparisons highlighting the particular severity of malnutrition in a country ¹² ; Food
		industry demonization ³² ; Increasing use of an obesogenic environment frame locating
		responsibility with the 'causes of the causes' of obesity and thus with a wider diversity of
		actors beyond the individual 19 32 39; When societal conditions and focusing events (e.g.

	drought, HIV/AIDS, health system reforms) provided an opportunity for strategically sensitising broader policy discourses to nutrition. ⁴²
Oppositional frame	Emphasis on individual/parental responsibility over governmental and industry
(overweight/obesity)	responsibility, portraying scientific evidence as contested or inconclusive ^{32 33 46 83} ; The
	'singling-out' of processed foods or beverages for intervention as unfair ^{32 43 81 97} ; Food
	regulation as undermining commercial viability ^{32 43 66} ; Government as a 'nanny' when
	intervening to address obesogenic food environments. 19 32 45 49 81

Capacities and resources

NANs possessing strategic capacities (Factor 16), described as "a body of craft knowledge with considerable practical utility" pS63, were more capable of building cohesive NANs, responding to opportunities and countering threats, and managing complex political and policy processes 15 18 42 57 58 60 61 65 67 91 At the individual level this included certain attributes of nutrition leaders (see Factor 2) and at the institutional level the capacity for building consensus, managing conflicts and developing competencies 29 37 42 44 51 57 58 62 63, establishing and maintaining strategic multi-stakeholder partnerships (i.e. coalition-building) 20 21 44 54 58 60 70 and undertaking strategic communication. The latter included the capacity to negotiate, compromise and tailor messages to different audiences 18 20 42 44 50 65 67, advocate for incremental/realistic changes aligned with decision-maker priorities 21 29 41 57 62 81 86, and to utilise champions with direct access to policymakers 20 55 57 60 62. In several studies, weak strategic capacities was reported as problematic. 12 18 31 32 38 50

Limited organizational capacities (Factor 17) frequently undermined commitment by constraining the effective management of nutrition policy responses and increasing the likelihood of policy failure (thus trapping nutrition within a 'low-priority cycle'). This was most evident in cases where competent nutrition professionals and administrative staff were lacking, especially at the local-level¹⁸ ²⁰ ³⁵ ³⁸ ⁵⁴ ⁵⁶ ⁵⁷ ⁶⁰ ⁷¹ ⁷⁵ ⁷⁸ ⁷⁹ ⁹² ⁹⁴, when there was a high turnover of ministers or administrative staff and/or disruptive administrative restructuring¹² ¹⁸ ³⁸ ⁵⁶ ⁵⁸ ⁷⁷, limited technical capacities particularly for multi-sectoral/level data collection, management and analysis²⁰ ³⁸ ⁵⁴ ⁵⁶ ⁷⁷ ⁷⁹ ⁹⁴, when high administrative loads were placed upon weak coordinating agencies and other relevant institutions²⁰ ⁴⁴ ⁵² ⁶⁵ ⁷¹ ⁷⁶ ⁷⁸ ⁷⁹, and when absent or weak budgeting, record-keeping and accounting capacities undermined financial planning, programming efficiency and accountability. ²⁰ ⁴⁴ ⁷¹ ⁷⁶ ⁷⁸ ⁷⁹

The expansion of nutrition budgetary commitments and effective financing systems (Factor 18) enabled commitment by empowering coordinating agencies and institutional systems, enabling effective policy implementation, and by creating entitlements among parliamentarians, bureaucrats and citizens. ²⁰ ²¹ ³¹ ³⁹ ⁷⁴ ⁷⁵ Performance and/or results-based budgeting was effective at incentivising multi-sector/-level cooperation, improving the transparency and accountability of institutional systems, and enhancing the efficiency of programming activities. ²⁰ ²¹ ³¹ ³⁷ ⁷⁴ More generally, accountability was enhanced when there were transparent financing and accounting systems for tracking disbursements. ²⁰ ³⁸ ⁴⁴ ⁵² ⁷⁹ ⁹⁴ In many cases, inadequate financial resources or the failure to effectively utilise existing resources led to poor implementation outcomes and policy failure. ¹⁸ ²⁰ ³⁸ ⁴⁴ ⁵² ⁵⁷ ⁶⁰ ⁶² ⁷⁰ ⁷¹ ⁷⁵ ⁷⁶ ⁷⁸ ⁷⁹ ⁹¹ ⁹² ⁹⁴ Financing activities were undermined by a limited capacity of sub-national implementation partners to utilise or reciprocate funding from central government ¹² ²⁰ ⁷⁰, the absence of nutrition line items in government budgets or the nesting of nutrition within budgets for non-mandated departments or issues ⁷¹ ⁷⁵ ⁷⁹ and when siloed financing arrangements encouraged inter-agency competition and disincentivised cooperation. ¹⁸ ³⁴ ⁴⁴ ⁵² ⁵⁴ ⁹⁴

DISCUSSION

We used a theoretically driven review method to identify the determinants of political commitment for nutrition at the country-level. Overall, we identified and described 18 factors organized into five themes: actors; institutions; political and societal contexts; knowledge, evidence and framing; and capacities

and resources. Many of the identified factors have been described previously in the literature on nutrition's 'political economy'. The results affirm the findings of reviews on undernutrition in low and middle-income countries, ^{8 9 12} and on nutrition and obesity in middle and high-income countries. ^{11 98} Similar themes have been found in global and supra-national studies. ^{90 99} We have, however, extended this work in two notable ways.

First, we integrated the nutrition politics and policy literature relevant to 'malnutrition in all its forms', thus spanning all issues and country-contexts. Although the included studies were not always directly comparable (due to differences in study design, theoretical focus and methods used), many of the determinants of political commitment were similar across issues and contexts. Irrespectively, effective nutrition actor networks, strong leadership, civil society mobilization, supportive political administrations, changing societal conditions and focusing events, cohesive and resonant framing, and data systems and evidence were commitment drivers.

There were some notable exceptions, likely reflecting the focus of distinct bodies of researchers working in different country-contexts. For example, factors within the 'institutions' and 'capacities and resources' themes were almost exclusively reported in low and middle-income country studies, although these are very likely to be important in high-income countries. Private sector interference was reported as impeding policy responses to obesity and diet-related NCDs exclusively in upper-middle and high-income countries. Nonetheless, these findings suggest that addressing 'malnutrition in all its forms' is likely to require some 'core' types of commitment-building activities, but with some context-dependent adaptations.

Second, previous reviews have listed and described relevant factors but have not elaborated on their interactions nor elaborated significantly on the role of context. Our results demonstrate that the determinants of political commitment for nutrition are strongly interdependent, context-dependent and dynamic, thus demonstrating systems-like features. This supports the need and provides a foundation for understanding the drivers of political commitment, and arguably the political economy of nutrition more generally, within a non-linear and dynamic model of change.²⁰ Qualitative system-dynamics modelling could be used to generate such a model and elaborate on the functioning of 'nutrition systems'. In this perspective, the effects of interactions among factors are likely to be significantly greater than the sum of their individual effects in isolation.¹⁰⁰

Future research directions

Although in recent decades a rich and growing literature on the political economy of nutrition has emerged, many evidence gaps remain. We explore a small number of these in the following section.

Theoretically, the broad repertoire of frameworks, theories and models used across the literature has provided multiple lenses through which to understand this complex topic. Arguably, studies using comprehensive and theoretically pluralistic frameworks^{e.g. 15} 20 38 have generated deeper insights into the functioning of 'nutrition systems' as a whole than those focused on certain facets (e.g. framing) or policy process stages (e.g. agenda-setting). Overall, we found the theory-driven framework synthesis method well suited to our aim of understanding a complex political phenomenon. However, empirical evidence in theoretically guided research is always generated, at least to some extent, by the theory itself. Thus, we may have missed important drivers of political commitment because they have been under-theorised and thus underreported in the literature. Indeed, important approaches in political science (e.g. new institutionalism) are largely absent and provide avenues for guiding future investigation.

Substantively, there are many research questions in need of answers of which some – given their crosscutting nature – are arguably most important. Several concern nutrition actor networks. How do such networks form, evolve and become effective? What pragmatic actions can be taken to rapidly enhance their effectiveness within countries? Several institutionalised belief systems (e.g. food-bias, nutri-

centrism) are strong commitment barriers. Why have these become institutionalised in some jurisdictions but not others? How might these be countered? Very few studies have focused on the reality that NANs concerned with obesity tend to be different to those concered with undernutrition. What opportunitiesdoes bringing together people and entities concerned with different forms of malnutrition present for furthering commitment to nutrition, especially as new institutional systems and policies for tackling overweight/obesity and diet-related NCDs are layered onto existing ones for undernutrition? The role of parliamentarians is also underexplored²⁰. How can non-partisan support for nutrition be attained and sustained more systematically at this level? Private sector interference is reported to have strongly impeded commitment for overweight/obesity and diet-related NCD prevention. How can NANs more effectively counteract this interference, while recognising that the private sector will inevitably have to be involved in delivering on objectives?

CONCLUSION

In this review we asked: what factors generate, sustain and constrain political commitment for nutrition at national and sub-national levels, how, and under what circumstances? Our aim was to inform strategic actions for building commitment over the United Nations Decade of Action on Nutrition. Overall, 18 factors were identified organized into five themes: actors; institutions; political and societal contexts; knowledge, evidence and framing; and capacities and resources. The results demonstrate that the processes driving commitment are multi-factorial, dynamic and strongly context-dependent. Furthermore, commitment is not something that simply exists or emerges accidentally; it can be created and strengthened over time through strategic action.⁹

Many of the divers of political commitment are similar irrespective of country-context or nutrition issue, but with some notable exceptions. This suggests that effective commitment-building strategies are likely to involve a set of 'core actions' but with some context-dependent adaptations. The main core action identified through this study is sustained commitment-building actions by cohesive, responsive and strongly-led nutrition actor networks. Accelerating the development of such networks should be a core task for all actors involved, including international development partners. To achieve their goals, nutrition actor networks should aim to enrol the support of political leaders, parliamentarians and administrative elites, and mobilize civil society coalitions. To sustain commitment, they must establish empowered institutions, develop organizational and strategic capacities, generate commitment among implementation partners at all levels, and mobilize the financial resources to do so.

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COMPETING INTERESTS

The authors declare no competing interests. Alessandro Demaio is a full time staff member of the World Health Organization. The authors alone are responsible for the views expressed in this publication and they do not necessarily represent the decisions, policy or views of the World Health Organization.

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