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The Parliament of the Commonwealth of Australia

# Food for thought: improving health and nutrition in the Indo-Pacific region

**First report for the inquiry into development partnerships in agriculture and agribusiness in promoting prosperity, reducing poverty and enhancing stability in the Indo-Pacific region**

Joint Standing Committee on Foreign Affairs, Defence and Trade  
Inquiry of the Foreign Affairs and Aid Sub-Committee

May 2016  
Canberra

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## Foreword

Good nutrition is an essential foundation for a good life. Access to adequate food is also a fundamental human right. Yet malnutrition remains an immense global problem, despite the benefits of sustained economic growth in many parts of the world.

This is particularly the case in the Indo-Pacific region where there is much evidence of a perverse ‘double burden’ of malnutrition – a combination of both undernutrition and overnutrition. While children’s growth is stunted, the highest rates of obesity and related non-communicable diseases, such as diabetes and heart disease, often blight the same populations.

All too many people in the Indo-Pacific, especially the Pacific, are also eating the wrong type of foods – foods that are high in fat and salt but low in nutritional value.

The terms of reference for the inquiry were very broad, covering the role of development partnerships in agriculture and agribusiness in promoting sustainable economic growth, improving livelihoods and strengthening food and nutrition security in developing countries in the Indo-Pacific region.

The inquiry took evidence that the double burden of malnutrition in the region, and especially in Pacific Island countries, threatens the health of individuals and the growth of their economies.

Undernutrition is a severe problem in some of Australia’s nearest neighbours with stunting all too prevalent in Timor-Leste and Papua New Guinea. An obesity epidemic with some of the world’s highest rates of obesity and associated non-communicable diseases afflicts Pacific Island countries such as Tonga, Samoa and Fiji. For example, the Fiji Ministry of Health and Medical Services has reported that diabetes is Fiji’s second biggest killer, with one in three Fijians affected.<sup>1</sup>

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1 The Fiji Ministry of Health and Medical Services, ‘What is Diabetes?’ <[www.health.gov.fj/?page\\_id=377](http://www.health.gov.fj/?page_id=377)> viewed 2 May 2016.

At the Diabetes and Wellness conference held in Lami, Fiji, in August 2015 the increase in diabetes and other non-communicable diseases were recognised as being at 'almost epidemic levels', with a diabetes related amputation being carried out in Fiji every 12 hours.<sup>2</sup>

Higher incomes have not necessarily led to better nutrition. On the contrary, evidence was given that nutritional intake has deteriorated. Economic and social change has led to significant dietary change. Where men have migrated to urban jobs or left the country for other work, women often remain behind to carry an additional burden of work, and are taking on more responsibility for agricultural production to both feed their families and earn an income. Remittances allow the purchase of convenience foods. The erosion of sustainable local agriculture and fisheries industries have also contributed to poor nutrition amongst many of our Pacific neighbours. Cheap, imported high fat foods including such items as deep fried mutton flaps, turkey tails and necks, and spam are available, affordable and often preferred.

In urban areas, advertising for fast foods and snacks have accelerated the move away from traditional, locally produced fish and vegetables. Soft drinks and processed convenience foods, as pointed out in our evidence, are promoted in advertising and are associated with higher status consumption.

Children are especially affected by this malnutrition. Stunted children face a greater lifetime risk of chronic health problems, have lower educational prospects, and less chance of escaping poverty. Obesity is a major factor in the rise of non-communicable disease including diabetes and heart disease – medical problems that are already placing considerable strain on the modest health care budgets and services of Pacific Island countries.

Women's experience of malnutrition is significantly different to that of men. Culture can constrain women; in some cultures women are expected to eat what remains after men have eaten, and at times of menstruation they may be restricted in their diets or from food preparation generally, or from tending to food production. Malnourished mothers face higher rates of mortality and can be more susceptible to complications during childbirth. Malnourished mothers can produce malnourished babies. Before the age of two the damage caused by this malnourishment can be irreversible.

Many women lack control over their family budgets, do not own land and have little or no access to finance to start up or sustain a business. These practices can all compound the problem of malnutrition.

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2 The Fiji Ministry of Health and Medical Services, 'Health Ministry Continues to address Diabetes', Media Centre [August 2015] < [www.health.gov.fj/?p=4588](http://www.health.gov.fj/?p=4588) > viewed 2 May 2016.

The multiple factors causing malnutrition need to be properly understood, but it does require urgent and sustained action through multi-sectoral partnerships – in agriculture, education, and health – to reduce and address the impacts of both over and undernutrition.

In this First Report the Committee makes a range of recommendations aimed at increasing and improving Australian and regional efforts to address the double burden of malnutrition, with a focus on the Pacific including Timor-Leste and Papua New Guinea. The Committee recommends that Australian aid funding for nutrition-related programs should become a sharper focus in our Official Development Assistance.

At a most fundamental level, efforts to address the complex problems of malnutrition require sustained and shared political commitment and the Committee urges the Minister for Foreign Affairs and the Minister for International Development and the Pacific to make these issues a high priority in Australia's bilateral and regional dialogues, especially with Pacific Island countries, and the Pacific Islands Forum.

The Committee would like to thank all of the non-government organisations, academics and individuals for generously donating their time, effort and resources to make submissions and appear at public hearings or private briefings.

The Committee also thanks the Australian Government agencies, as well as the governments of other countries that provided submissions or gave evidence. The range of information, expertise and experience that was available to the Committee was invaluable to the production of this report.

As Chair of the Foreign Affairs and Aid Sub-Committee, I would also like to thank my colleagues on the Committee who have worked collaboratively on, and engaged closely with, this inquiry.

The Hon Dr Sharman Stone MP  
Chair  
Foreign Affairs and Aid Sub-Committee





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Mr Nickolas Varvaris MP  
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Mr Matt Williams MP  
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## Committee secretariat

Secretary	Mr Jerome Brown
Inquiry Secretary	Ms Sonya Fladun
Research Officers	Ms Loes Slattery Mr Adam Patterson
Administrative Officers	Mrs Dorota Cooley Ms Kathy Blunden



## Terms of reference

The Committee will inquire into and report on the role of current and potential development partnerships in the food and agriculture sector with a range of stakeholders – including from business, civil society, the research and academic community, industry bodies and governments – in promoting prosperity, reducing poverty, and enhancing stability in the Indo-Pacific region. The inquiry will take into account the results of previous related inquiries, and will have particular regard to:

- Australia's contribution and achievements to date in catalysing sustainable economic growth, improving livelihoods and strengthening food and nutrition security through partnerships in the agriculture and food sector in developing countries in the region
  - including the extent to which these efforts support our national interest
- The particular roles of agricultural innovation in supporting agricultural development and inclusive economic growth
- Actions and approaches to agricultural development in the region that would promote gender equity, women's economic empowerment and health
- The current and potential role of the private sector, including small developing-country entrepreneurs and larger Australian and international businesses, in driving inclusive and sustainable development in Indo-Pacific agriculture and food value chains
- Innovative modalities and practices that would enhance the contribution of all relevant stakeholders in supporting agricultural development, better nutrition and inclusive economic growth in the Indo-Pacific region





## List of abbreviations

ACIAR	Australian Centre for International Agricultural Research Centre
ADB	Asian Development Bank
ANCP	Australian NGO Co-operation Program
AUD	Australian Dollar
BMI	Body Mass Index
CSIRO	Commonwealth Scientific and Industrial Research Organisation
DAC	OECD Development Assistance Committee
DAWR	Department of Water and Resources
DFAT	Department of Foreign Affairs and Trade
DFID	UK Department for International Development
DoH	Department of Health
EU	European Union
FAO	Food and Agriculture Organization
IFPRI	International Food Policy Research Institute
JSCFADT	Joint Standing Committee on Foreign Affairs, Defence and Trade
MAF	Timor-Leste Ministry of Agriculture and Fisheries
GAIN	Global Alliance on Improved Nutrition

MDGs	Millennium Development Goals
ODA	Official Development Assistance
NCDs	Non-communicable diseases
NGO	Non-government organisation
ODE	Office of Development Effectiveness
OECD	Organization for Economic Co-operation and Development
PICs	Pacific Island Countries
PIF	Pacific Island Forum
PM&C	Department of Prime Minister and Cabinet
PNG	Papua New Guinea
SDGs	Sustainable Development Goals
SMEs	Small and Medium Enterprises
SPC	Secretariat of the Pacific Community
SUN	Scaling Up Nutrition Movement
TB	Tuberculosis
UK	United Kingdom
UN	United Nations
UNICEF	United Nations Children's Fund
US	United States
USAID	United States Agency for International Development
USD	United States Dollar
WHO	World Health Organization



## Glossary<sup>3</sup>

**Body Mass Index (BMI):** The ratio is obtained by dividing the weight in kilograms by the square of the height in metres.

**Food fortification:** The addition of one (or more) essential nutrient(s) to a food whether or not it is normally contained in the food, for the purpose of preventing or correcting a deficiency of one or more nutrients in the population or specific population groups.

**Macronutrients:** The proteins, carbohydrates and fats that are available to be used for energy. They are measured in grams.

**Malnutrition:** An abnormal physiological condition caused by inadequate, unbalanced or excessive consumption of macronutrients and/or micronutrients. Malnutrition includes undernutrition and overnutrition as well as micronutrient deficiencies.

**Micronutrients:** Vitamins, minerals and certain other substances that are required by the body in small amounts. They are measured in milligrams or micrograms.

**Micronutrient deficiency:** Lack of vitamins, minerals and/or trace elements required in small amounts which are essential for the proper functioning, growth and metabolism of a living organism.

**Overnourishment:** Food intake that is continuously in excess of dietary energy requirements.

**Overnutrition:** A result of excessive food intake relative to dietary nutrient requirements.

**Overweight and obesity:** Body weight that is above normal for height as a result of an excessive accumulation of fat. It is usually a manifestation of

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3 Food and Agriculture Organization (FAO), 'FAO Term Portal' <[www.fao.org/faoterm/en/](http://www.fao.org/faoterm/en/)> viewed 15 April 2016.

overnourishment. Overweight is defined as a BMI of more than 25 but less than 30 and obesity as a BMI of 30 or more.

**Stunting:** Low height for age, reflecting a past episode or episodes of sustained undernutrition.

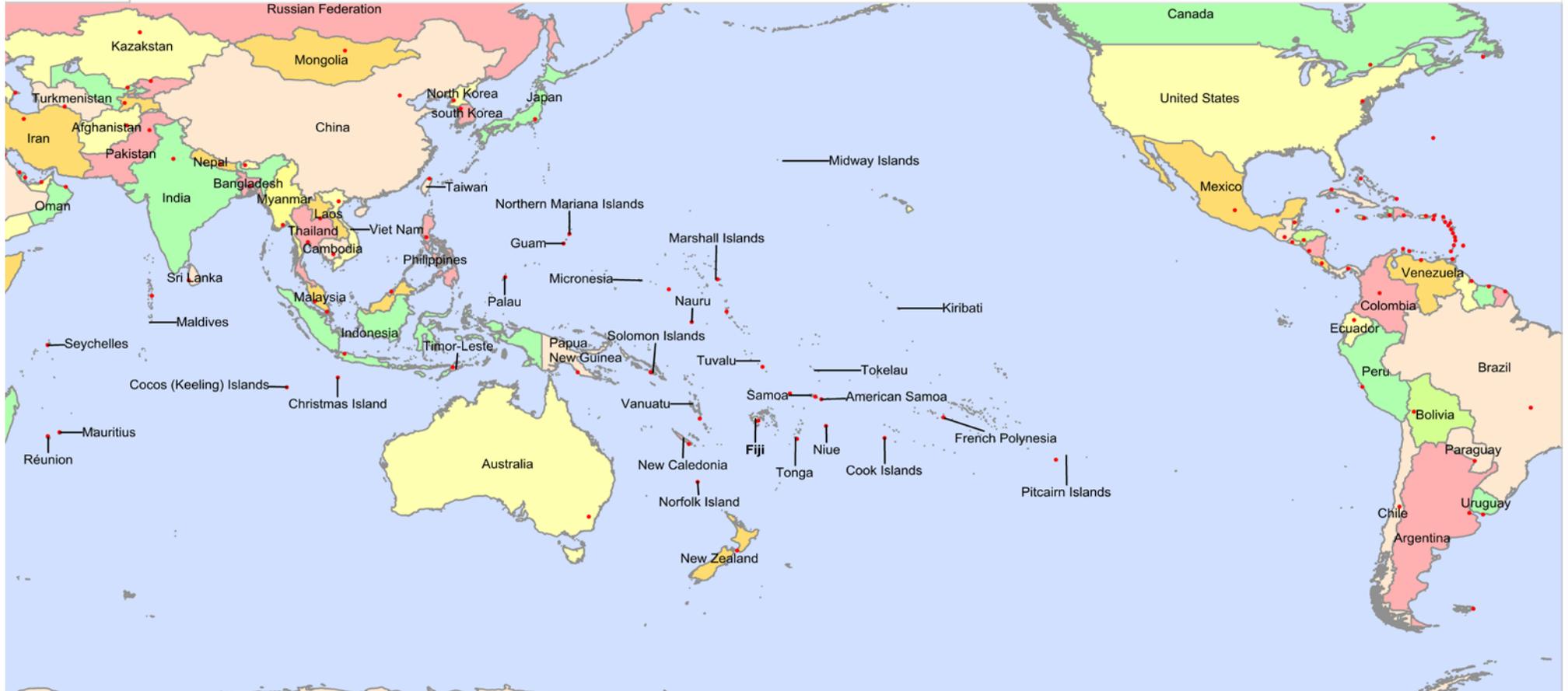
**Undernourishment:** A condition, lasting for at least one year, of inability to acquire enough food, defined as a level of food intake insufficient to meet dietary energy requirements. For the purposes of this report, hunger was defined as being synonymous with chronic undernourishment.

**Undernutrition:** The outcome of undernourishment, and/or poor absorption and/or poor biological use of nutrients consumed as a result of repeated infectious disease. It includes being underweight for one's age, too short for one's age (stunted), dangerously thin for one's height (wasted) and deficient in vitamins and minerals (micronutrient malnutrition).

**Underweight:** Low weight for age in children, and BMI of less than 18.5 in adults, reflecting a current condition resulting from inadequate food intake, past episodes of undernutrition or poor health conditions.

**Wasting:** Low weight for height, generally the result of weight loss associated with a recent period of starvation or disease.

# INDO - PACIFIC REGION



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# List of recommendations

## 5 Future directions for nutrition security

### Recommendation 1

The Committee recommends that the Australian Government:

- develop a stronger regional policy and funding focus under Australia's Official Development Assistance program on both nutrition-specific and nutrition-sensitive activities; and
- consider announcing Australia's new Indo-Pacific nutrition policy and funding focus at the forthcoming Nutrition for Growth Summit, to be held in Rio de Janeiro in the second half of 2016.

### Recommendation 2

The Committee recommends that the Australian Government:

- continue to support and scale up aid innovations aimed at improving nutrition outcomes, including through the Department of Foreign Affairs and Trade's innovationXchange;
- give priority support to innovative aid partnerships and approaches that leverage private sector finance and expertise in support of improved nutrition outcomes; and
- focus the above efforts, in particular, on finding solutions that help address the 'double burden' of malnutrition and obesity in the Pacific region.

### Recommendation 3

The Committee recommends that the Australian Government commit to strengthening existing whole-of-government co-ordination on nutrition, including through:

- designating a central Australian Government ‘DFAT point of contact’ for all of Australia’s international engagement on nutrition (including through Australia’s aid program); and
- developing an intersectional strategy (e.g. engaging education, agriculture, health, women’s empowerment, climate change, and credit support) to guide all of Australia’s international policy and program engagement on nutrition, including both nutrition-specific and nutrition-sensitive investments under the Australian aid program.

### Recommendation 4

The Committee recommends that the Australian Government consider taking a leadership role in co-ordinating an effective donor response to the specific challenge posed by the health ‘double burden’ in the Pacific region, including through:

- developing strategies to combat malnutrition – both undernutrition and overnutrition – a high priority for the Minister for Foreign Affairs and the Minister for International Development and the Pacific, in particular through regional fora such as the Pacific Islands Forum;
- lobbying strongly for Pacific Island countries to join the Scaling Up Nutrition Movement, to help ensure that the region’s ‘double burden’ becomes a priority in its forward agenda;
- commissioning a major ‘stocktake’ of nutrition interventions that are currently being pursued by lead aid donors and relevant international organisations in the Pacific region, with a view to assessing how future co-ordination and collaboration on nutrition issues between these key players could be improved and expanded;
- supporting innovative and effective public health education campaigns in Pacific Island countries including creative engagement of local media, to promote healthy dietary choices; and
- strengthening the evidence base to inform future policymaking by:
  - ⇒ driving regional efforts to improve the availability and use of reliable and timely data on relevant nutrition indicators;
  - ⇒ working to strengthen nutrition data collection and analytical capacity among partner countries in the region; and

⇒ encouraging and supporting researchers across a range of disciplines to focus more on nutrition issues in the Pacific region.



## Introduction

### Conduct of the inquiry

- 1.1 On 19 August 2015, the Minister for Foreign Affairs, the Hon Julie Bishop MP, asked the Joint Standing Committee on Foreign Affairs, Defence and Trade (JSCFADT) to inquire into the role of development partnerships in agriculture and agribusiness in promoting prosperity, reducing poverty and enhancing stability in the Indo-Pacific region. The inquiry's terms of reference were adopted and the inquiry referred to the Foreign Affairs and Aid Sub-Committee (the Sub-Committee) to undertake.
- 1.2 The Sub-Committee subsequently received over fifty written submissions and heard evidence from a range of witnesses during public hearings held in February and March 2016. Unanticipated scheduling changes to the Parliamentary sitting calendar in the first half of 2016, and members' limited availability during this period, restricted the Sub-Committee's ability to proceed with further public hearings.
- 1.3 In view of these constraints, the Sub-Committee decided to prepare a First Report focusing on a specific topic referred to in the terms of reference: nutrition and related health issues in the Indo-Pacific region, particularly with regard to Pacific countries (given the leadership role Australian maintains in that region through its aid program to the Pacific).<sup>1</sup>
- 1.4 The Sub-Committee decided that the remaining terms of reference could be addressed in a subsequent report, subject to the duration of the Parliament or the recommencement of the inquiry in the next Parliament.

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<sup>1</sup> Commonwealth of Australia, *Foreign Affairs and Trade Portfolio Budget Statements 2015-16, Budget Related Paper No. 1.9*, Canberra, May 2015, p. 18.

- 1.5 With regard to the broader terms of reference, the Sub-Committee points out that its previous report *Partnering for Greater Good* (June 2015), made thirty-three recommendations which addressed the role of private sector partnerships, with other stakeholders, to achieve regional development goals. In the course of that analysis, there was detailed discussion of the importance of inclusive business models and of women's empowerment, including in the agriculture sector, to the promotion of economic growth and the reduction of poverty in the region.<sup>2</sup>
- 1.6 Further work regarding women's economic development in agriculture was addressed in the JSCFADT Sub-Committee on Human Rights report *Empowering Women and Girls* (December 2015) which recommended, among other things, that the Australian Government should promote 'gender centric approaches to women's economic empowerment in key sectors, for example, the agriculture sector'.<sup>3</sup>

## Focus of the first report

- 1.7 Early in the inquiry, it became clear to the Sub-Committee that nutrition issues, particularly as they arise in Australia's Indo-Pacific neighbours, warranted special focus. A number of the inquiry's witnesses highlighted the importance of tackling a range of key nutrition and related health problems in the region, many of which either show no signs of improvement or are worsening. Their evidence suggested that these issues collectively reflect a significant threat not only to the region's agricultural productivity and food security, but indeed to its long-term human and economic development.
- 1.8 The inquiry found that this situation is especially worrying in the Pacific region. Despite steady reductions in the prevalence of undernutrition in most of Asia over the past two decades, there have been almost no improvements in the Pacific region since 1990.<sup>4</sup> For example, rates of stunted growth in children among some of our Pacific neighbours remain

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2 Joint Standing Committee on Foreign Affairs, Defence and Trade (JSCFADT), *Partnering for the Greater Good: the Role of the Private Sector in Promoting Economic Growth and Reducing Poverty in the Indo-Pacific Region*, Canberra, June 2015.

3 Recommendation 26, in JSCFADT, *Empowering Women and Girls: the Human Rights Issues Confronting Women and Girls in the Indo-Pacific Region*, Canberra, December 2015, p. 278.

4 M Toole, 'Stunted Growth and Obesity: the Double Burden of Poor Nutrition on Our Doorstep', *The Conversation*, 24 March 2016, <[theconversation.com/stunted-growth-and-obesity-the-double-burden-of-poor-nutrition-on-our-doorstep-50385](http://theconversation.com/stunted-growth-and-obesity-the-double-burden-of-poor-nutrition-on-our-doorstep-50385)> viewed 4 April 2016.

very high, including Timor-Leste (60 per cent),<sup>5</sup> Papua New Guinea (44 per cent), Kiribati (33 per cent) and Vanuatu (26 per cent).<sup>6</sup>

- 1.9 At the same time, significant undernutrition co-exists with serious overnutrition across the region.<sup>7</sup> Globally, of the top ten countries with the highest rates of overweight and obese adults, nine are Pacific island nations.<sup>8</sup> This is widely referred to as the ‘double-burden’ of malnutrition. In the Solomon Islands, for example, 33 per cent of children are stunted, while 39 per cent of women are obese. There are also clear longer term linkages between undernutrition and overnutrition: undernourished children are vulnerable to obesity and related non-communicable diseases (NCDs), such as diabetes and cardiovascular disease, later in life.<sup>9</sup>
- 1.10 For a number of Australia’s Pacific neighbours, the health and economic consequences of malnutrition – encompassing both undernutrition and overnutrition – are seriously detrimental for individuals, households, and societies. The societal costs of malnutrition and related NCDs include high costs to the health system, loss of productivity, and a reduced gross domestic product (GDP) due to absenteeism, chronic illness, disability, and premature death.<sup>10</sup>
- 1.11 The causes of malnutrition in the region vary widely. The prevalence of undernutrition in some countries is linked to immediate causes such as inadequate food intake and infectious diseases, as well as underlying causes such as lack of access to safe water, sanitation and basic hygiene practices, low food availability and limited dietary diversity, low agricultural productivity and low status of women who are also the main workers in agriculture.<sup>11</sup> The rising prevalence of overnutrition has been associated with increased access to cheap, low-quality food imports and the ‘westernisation’ of food consumption patterns.<sup>12</sup> Access to remittance payments relieves some of the need to grow their own food. More broadly, nutrition security in the Pacific region is being challenged by rapid population growth and urbanisation, increased advertising of high

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5 *Exhibit 10: R Alders, ‘Feeding the world: addressing gender divides could help reduce malnutrition,’ The Conversation, September 25, 2013.*

6 Department of Foreign Affairs and Trade (DFAT), *Submission 12*, p. 34.

7 DFAT, *Submission 12*, p. 33.

8 M Toole, ‘Stunted Growth and Obesity’, *The Conversation*, 24 March 2016, viewed 4 April 2016.

9 DFAT, *Submission 12*, p. 33.

10 DFAT, *Submission 12*, p. 33.

11 M Toole, ‘Stunted Growth and Obesity’, *The Conversation*, 24 March 2016, viewed 4 April 2016.

12 Food and Agriculture Organization (FAO), *The State of Food Insecurity in the World: Meeting the 2015 International Hunger Targets: Taking Stock of Uneven Progress*, Rome, 2015, p. 25.

salt-high fat-low cost food, shortages of arable land and dwindling coastal fisheries resources.<sup>13</sup>

- 1.12 International studies suggest that malnutrition poses a major constraint to economic growth and hinders progress in alleviating poverty.<sup>14</sup> For instance, the Food and Agriculture Organisation has estimated that the economic costs associated with malnutrition account for as much as 5 per cent of global GDP.<sup>15</sup> Given the limited availability of reliable health and nutrition data in the region, it is difficult to estimate the economic costs of malnutrition for the Pacific Island countries. However, the cost of undernutrition alone in Africa and Asia has been estimated to be 11 per cent of GDP per year.<sup>16</sup> It is therefore reasonable to assume there are similar costs for countries in the Pacific region, not to mention the substantial additional costs associated with overnutrition.
- 1.13 The Sub-Committee's view is that Australian action, particularly through the work of our aid program, is vital to addressing this looming crisis. Aid investments that tackle nutrition issues promote Australia's long-term national interests by contributing directly to sustainable economic growth and poverty reduction among our closest regional neighbours. Moreover, nutrition-related aid investments are considered to be among the most cost-effective interventions in the field of development.<sup>17</sup>
- 1.14 This first report will therefore focus on the ongoing nutrition and health challenge in the Indo-Pacific region, the extent to which Australia's existing aid investments are supporting Pacific Island countries' efforts to combat this challenge, and how to best prioritise and deliver future aid resources in this critical area.

## **Inquiry evidence and stakeholder engagement**

- 1.15 On 30 September 2015, the Sub-Committee invited relevant stakeholders – groups and individuals – to make submissions to the inquiry. The Committee received over 50 submissions and 30 exhibits from governments of other countries, government departments, businesses, academics, business councils and representative bodies, non-government organisations, and individuals within Australia and globally. Submissions

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13 DFAT, *Submission 12*, pp. 33–35.

14 FAO, *The State of Food Insecurity in the World: Meeting the 2015 International Hunger Targets: Taking Stock of Uneven Progress*, Rome, 2015, p. 27.

15 FAO, *The State of Food and Agriculture 2013: Food Systems for Better Nutrition*, Rome, 2013, p. ix.

16 International Food Policy Research Institute (IFPRI), *Global Nutrition Report 2014*, 2014, p. 8.

17 IFPRI, *2013 Global Food Policy Report*, 2014, p. 81.

are listed in Appendix A and documents received as exhibits during the inquiry are listed at Appendix B.

- 1.16 During February and March 2016, the Committee took evidence from 16 diverse organisations and individuals at six public hearings held in Canberra and Sydney. Details of witnesses who gave evidence can be found at Appendix C. Answers provided by witnesses to questions on notice are listed at Appendix D.
- 1.17 Copies of submissions and transcripts of public hearings are available on the inquiry's page on the JSCFADT's website.<sup>18</sup>
- 1.18 Given that many of the submissions and other primary evidence gathered during the course of the inquiry address the inquiry's full terms of reference, and therefore do not cover nutrition issues in detail, it was not possible for the Sub-Committee to draw almost exclusively on this material in preparing this first report. Consequently, where necessary, other secondary sources of evidence were used, including research from internationally recognised experts in relevant fields such as nutrition, health, agricultural productivity and food security, and gender equality and women's economic empowerment. In an effort to shine a spotlight on the Pacific experience of malnutrition, media reports which provided local perspectives were also drawn upon. While more time would have afforded a more in depth investigation of these issues, the Sub-Committee took the view that the urgency and magnitude of problems in the Pacific justified a first report within the life of the current parliament.
- 1.19 The Sub-Committee wishes to thank all those who provided written submissions and gave evidence to the Sub-Committee, as well as to extend a special thanks to governments from other countries and international organisations for making submissions to the inquiry, including:
- Canada (Global Affairs Canada – *Submission 38*);
  - New Zealand (Ministry of Foreign Affairs and Trade – *Submission 29*);
  - The Netherlands (Ministry of Foreign Affairs – *Submission 30*); and
  - World Bank Group (*Submission 20*).

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18 Available at <[www.aph.gov.au/Parliamentary\\_Business/Committees/Joint/Foreign\\_Affairs\\_Defence\\_and\\_Trade/Development-Agriculture](http://www.aph.gov.au/Parliamentary_Business/Committees/Joint/Foreign_Affairs_Defence_and_Trade/Development-Agriculture)> viewed 5 April 2015.

## Structure of the first report

- 1.20 The main purpose of this first report is to highlight the double burden of malnutrition that is being experienced by our Pacific neighbours.
- 1.21 The report provides an overview of the broader global nutrition context, including current international efforts to address nutrition issues, global nutrition targets, and Australia's own aid policy settings and investments in this area.
- 1.22 The report also examines the nexus between agriculture, women's status and good nutrition. Specifically, it assesses how both agricultural development and gender interventions, by themselves, and in combination can contribute to improved nutrition outcomes.
- 1.23 Based on the evidence, the report considers possible future directions for the Australian aid program's work on nutrition, including where Australia (together with its development partners) is best placed to assist. This includes an examination of how the use of innovation can potentially play a key role in supporting enhanced nutrition outcomes in the region.
- 1.24 The report comprises five chapters. The remaining chapters include:
- Chapter 2 – background on the broader global nutrition context and Australia's nutrition aid policy settings and investments;
  - Chapter 3 – the status and causes of malnutrition in the Indo-Pacific region;
  - Chapter 4 – the nexus between agriculture, women and nutrition; and
  - Chapter 5 – future directions for regional nutrition security.

## Background

2.1 While the main focus of this First report is on nutrition and related health issues in the Indo-Pacific region, and especially Pacific Island countries, it is useful to consider these issues against the broader international context, including:

- good nutrition as a human right, and nutrition terminology;
- the rationale for prioritising good nutrition over other development objectives;
- global nutrition trends;
- action taken by the international community to date;
- global and Australian aid spending on nutrition; and
- Australia's aid policy settings and investments in this area.

### Good nutrition as a human right

2.2 Access to nutritious food is a fundamental human right. The right to adequate food as a human right was first formally recognised by the United Nations in the 1948 *Universal Declaration of Human Rights* (UDHR), as a part of the right to a decent standard of living. UDHR Article 25 states that:

Everyone has the right to a standard of living adequate for the health and well-being of himself and of his family, including food, clothing, housing and medical care and necessary social services, and the right to security in the event of unemployment, sickness,

disability, widowhood, old age or other lack of livelihood in circumstances beyond his control.<sup>1</sup>

- 2.3 In 1999, the United Nations Committee on Economic, Social and Cultural Rights (CESCR) observed that: 'The right to adequate food is realised when every man, woman and child, alone or in community with others, has the physical and economic access at all times to adequate food or means for its procurement.'<sup>2</sup>
- 2.4 Article 24 of the United Nations *Convention on the Rights of the Child*, provides that States Parties must 'recognise the right of the child to the enjoyment of the highest attainable standard of health.'<sup>3</sup>
- 2.5 Article 24 *inter alia* further requires that Parties take appropriate measures to diminish infant and child mortality, to ensure the provision of medical assistance and health care, and:
- (c) To combat disease and malnutrition, including within the framework of primary health care, though, *inter alia*, the application of readily available technology and through the provision of adequate nutritious foods and clean drinking-water, taking into consideration the dangers and risks of environmental pollution;
- ...
- (e) To ensure that all segments of society, in particular parents and children, are informed, have access to education and are supported in the use of basic knowledge of child health and nutrition, the advantages of breastfeeding, hygiene and environmental sanitation and the prevention of accidents.<sup>4</sup>
- 2.6 The *Convention on the Rights of the Child* has been ratified by all countries in the Indo-Pacific region, and indeed by all countries worldwide, with the exception of the United States which has signed but not ratified the Convention.<sup>5</sup>

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1 The Universal Declaration of Human Rights, <[www.un.org/en/universal-declaration-human-rights/](http://www.un.org/en/universal-declaration-human-rights/)> viewed 26 April 2016.

2 Food and Agriculture Organization (FAO), 'About Right to Food', The Human Right to Adequate Food <[www.fao.org/righttofood/about-right-to-food/en/](http://www.fao.org/righttofood/about-right-to-food/en/)> viewed 26 April 2016.

3 United Nations Human Rights Office of the High Commissioner, 'Convention on the Rights of the Child' <[www.ohchr.org/en/professionalinterest/pages/crc.aspx](http://www.ohchr.org/en/professionalinterest/pages/crc.aspx)> viewed 26 April 2016.

4 United Nations Human Rights Office of the High Commissioner, 'Convention on the Rights of the Child', viewed 26 April 2016.

5 United Nations Treaty Collection, 'Convention on the Rights of the Child', <[treaties.un.org/Pages/ViewDetails.aspx?src=TREATY&mtdsg\\_no=IV-11&chapter=4&lang=en](http://treaties.un.org/Pages/ViewDetails.aspx?src=TREATY&mtdsg_no=IV-11&chapter=4&lang=en)> viewed 26 April 2016.

## Nutrition definitions

- 2.7 There is no one set of internationally accepted definitions in relation to nutrition. A number of relevant international bodies, including the World Health Organization (WHO), the Food and Agriculture Organization (FAO), the World Food Programme (WFP), the United Nations Children's Emergency Fund (UNICEF) and the World Bank, have all published their own definitions.
- 2.8 For the purposes of this first report, the definitions listed in the FAO's glossary of terms will be used.<sup>6</sup> The Glossary in the front matter of this report provides some key definitions. Other particularly pertinent terms are also discussed in Chapter three.

## Importance of good nutrition

- 2.9 International research emphasises that good nutrition in early life – particularly during the first 1 000 days (from conception to age two) – lays the foundation for good health and productivity in later life.<sup>7</sup> A child's experience and the impacts during this narrow window are often irreversible.<sup>8</sup> Better nourished infants have better motor skills and cognitive development and do substantially better in school, leading to greater productivity, better health and higher incomes in adulthood.<sup>9</sup>
- 2.10 The health-related consequences of *undernutrition* include disadvantages including childhood illness, short stature and lower cognitive development, which may result in lower education attainment, poor pregnancy outcomes, and greater susceptibility to chronic diseases in later life.<sup>10</sup> These disadvantages can also have a serious impact on economic productivity.<sup>11</sup> At the national level, the impacts extend to reduced gross domestic product (GDP) and large public health costs for many developing countries. The annual costs of undernutrition and

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6 FAO, 'FAO Term Portal' <[www.fao.org/faoterm/en/](http://www.fao.org/faoterm/en/)> viewed 15 April 2016.

7 R Black *et al*, 'Maternal and Child Undernutrition and Overweight in Low-Income and Middle-Income Countries', *Lancet*, Vol. 382, 3 August 2013, p. 445.

8 Save the Children, *State of the World's Mothers 2012: Nutrition in the First 1 000 Days*, May 2012, p. 5.

9 Department of Foreign Affairs and Trade (DFAT), *Health for Development Strategy 2015–2020*, Canberra, June 2015, p. 12.

10 Save the Children, *Nutrition in the First 1 000 Days: State of the World's Mothers 2012*, May 2012, p. 11.

11 S Grantham-McGregor *et al*, 'Developmental Potential in the First Five Years for Children in Developing Countries', *Lancet*, Vol. 369, 6 January 2007, p. 67.

micronutrient deficiencies are estimated at 2–3 per cent of global GDP, equivalent to USD 1.4–2.1 trillion per year.<sup>12</sup>

- 2.11 The consequences of *overnutrition* for individuals, households, and societies are no less severe. Chronic disease related to being overweight or obesity impedes an individual’s ability to work, while also burdening them with increased health care costs. The societal costs of overnutrition include high costs to the health system, loss of productivity, and a reduced GDP due to absenteeism, chronic illness, disability, and premature death.<sup>13</sup> The FAO notes that, while no global estimates of the annual economic impact of overnutrition exist, the cumulative cost of all non-communicable diseases – for which overweight and obesity are leading risk factors – were estimated to be about USD 1.4 trillion in 2010.<sup>14</sup>
- 2.12 Given the magnitude of the problem, aid investments in addressing malnutrition are recognised as some of the most powerful and cost-effective in global development.<sup>15</sup> For example, well-nourished children are 33 per cent more likely to escape poverty as adults.<sup>16</sup>
- 2.13 As a value-for-money investment, nutrition is assessed, globally, to return \$16 for every dollar invested.<sup>17</sup> An expert panel of leading economists convened by the Copenhagen Consensus Center in 2012 ranked malnutrition interventions first among the 16 most cost effective solutions to the world’s major development challenges.<sup>18</sup>
- 2.14 As part of its submission to the inquiry, the Center also asserted that investments in nutrition for small children generated significantly higher returns, noting:

We found that the very best investment is in providing nutrition for small children. Every dollar spent would do \$45 of social good, mostly in better education and employment outcomes. The benefit-cost ratio is even better for individual countries in the Indo-Pacific region: \$93 for India and \$115 for Indonesia.<sup>19</sup>

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12 FAO, *The State of Food and Agriculture 2013: Food Systems for Better Nutrition*, Rome, 2013, p. ix.

13 DFAT, *Health for Development Strategy 2015-2020*, Canberra, June 2015, p. 12.

14 FAO, *The State of Food and Agriculture 2013: Food Systems for Better Nutrition*, Rome, 2013, p. ix.

15 Save the Children, *State of the World’s Mothers 2012: Nutrition in the First 1,000 Days*, May 2012, p. 2.

16 L. Haddad, *Child Growth = Sustainable Economic Growth: Why We Should Invest in Nutrition*, Children’s Investment Fund Foundation, May 2013, p. 1.

17 International Food Policy Research Institute (IFPRI), *Global Nutrition Report 2014*, 2014, p. xiv.

18 B Lomborg, *How to Spend \$75 Billion to Make the World a Better Place*, Copenhagen Consensus Center, 2013.

19 Copenhagen Consensus Center, *Submission 4*, p. 1.

## Global trends

- 2.15 International research suggests that the global challenge posed by malnutrition is staggering. Malnutrition affects all countries and almost one in three people worldwide. Nearly half of all countries are dealing with more than one type of malnutrition at the same time.<sup>20</sup> The *Global Nutrition Report 2015*, drawing on a number of recent international sources, highlights the scale of the challenge by noting:
- 2 billion people experience micronutrient malnutrition;
  - 1.9 billion adults are overweight or obese;
  - 161 million children under age 5 are too short for their age (stunted), 51 million don't weigh enough for their height (wasted), and 42 million are overweight;
  - 794 million people are estimated to be calorie deficient; and
  - 1 in 12 adults worldwide have Type 2 diabetes.<sup>21</sup>
- 2.16 Across the world some consequences of malnutrition, such as stunting, are showing slow and uneven declines; but other forms, such as anaemia in women of reproductive age, are stagnant. Others, such as overweight and obesity, are increasing.<sup>22</sup>

## Global discussions

- 2.17 Two recent international events – the Second International Conference on Nutrition (ICN2) and the Nutrition for Growth Summit (N4G) – have focused attention on the importance of addressing nutrition issues and mobilising the global donor community to take action in this area.
- 2.18 At the N4G Summit, held in London on 8 June 2013, a broad mix of stakeholders – representing governments, UN agencies, civil society organisations, businesses, donors, and other relevant bodies – participated to consider how to improve nutrition worldwide. As a result, 90 of these stakeholders signed the *Global Nutrition for Growth Compact*, through which they publicly committed to take concrete action to address malnutrition.<sup>23</sup> Australia was represented at the event and was a signatory to the Compact. A follow-up N4G Summit is tentatively scheduled to be held in Rio de Janeiro early in the second half of 2016.<sup>24</sup>

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20 IFPRI, *Global Nutrition Report 2015*, 2015, p. 3.

21 IFPRI, *Global Nutrition Report 2015*, 2015, p. 3.

22 IFPRI, *Global Nutrition Report 2015*, Washington DC, 2015, p. 3.

23 IFPRI, *Global Nutrition Report 2015*, Washington DC, 2015, p. 27.

24 RESULTS International (Australia), *Submission 5*, p. 10.

- 2.19 The ICN2 was hosted jointly by FAO and WHO in Rome from 19-21 November 2014, with the participation of more than 170 governments and 250 civil society and private sector representatives. The event's goal was to refocus international attention on addressing malnutrition in all its forms through policies that effectively address the world's major nutrition challenges.<sup>25</sup>
- 2.20 Australia participated in the event, including in the development and subsequent adoption of the high-level outcomes statement, the *Rome Declaration on Nutrition*, and the *Framework for Action (FFA)*.<sup>26</sup> The *Rome Declaration* calls on countries to eradicate hunger and prevent all forms of malnutrition worldwide. The voluntary FFA provides a ten-year strategy to guide implementation of the *Rome Declaration* commitments through various policy options.
- 2.21 In addition to these measures, there has been increased global co-operation between stakeholders seeking to improve nutrition outcomes. Established in 2011, the Scaling-Up Nutrition (SUN) Movement has over 2 000 member organisations, encompassing governments, civil society, the United Nations and other multilateral organisations, businesses and research institutions.<sup>27</sup> Australia joined the platform as a SUN Donor in June 2013.<sup>28</sup>

## Global targets

- 2.22 A number of high-level targets have been agreed to focus international efforts on addressing key nutrition challenges.
- 2.23 In May 2012, the World Health Assembly (the World Health Organisation's chief decision-making body) endorsed a *Comprehensive Implementation Plan on Maternal, Infant and Young Child Nutrition*,<sup>29</sup> which specified a set of six global nutrition targets that, by 2025, aim to:
1. achieve a 40 per cent reduction in the number of children under-5 who are stunted;

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25 Department of Health (DoH), *Submission 2*, p. 1.

26 DoH, *Submission 2*, p. 1.

27 DFAT, *Submission 12*, p. 35.

28 Australian Agency for International Development (AusAID), *AusAID Annual Report 2012-13*, Canberra, October 2013, p. 29.

29 World Health Organisation (WHO), *Comprehensive Implementation Plan on Maternal, Infant and Young Child Nutrition*, Resolution WHA65.6, 65<sup>th</sup> World Health Assembly, Geneva, 21-26 May 2012.

2. achieve a 50 per cent reduction of anaemia in women of reproductive age;
  3. achieve a 30 per cent reduction in low birth weight;
  4. ensure that there is no increase in childhood overweight;
  5. increase the rate of exclusive breastfeeding in the first 6 months up to at least 50 per cent;
  6. reduce and maintain childhood wasting to less than 5%.<sup>30</sup>
- 2.24 In May 2015, World Health Organisation (WHO) Member States agreed an accompanying set of indicators to monitor progress in meeting the aforementioned targets. They have also been asked to begin reporting on most of these indicators from 2016, and others from 2018.<sup>31</sup>
- 2.25 In September 2015, the United Nations adopted the *2030 Agenda for Sustainable Development*, committing countries to working collaboratively to end poverty and to implementing 17 Sustainable Development Goals (SDGs) and 169 targets by 2030. The SDGs build on the preceding Millennium Development Goals (MDGs), broadened to apply to all countries, and encompass the three dimensions of sustainable development: economic, social and environmental.
- 2.26 Under SDG 2 ('End Hunger, Achieve Food Security and Improved Nutrition and Promote Sustainable Agriculture'), Target 2.2 relates specifically to malnutrition:
- By 2030, end all forms of malnutrition, including achieving, by 2025, the internationally agreed targets on stunting and wasting in children under 5 years of age, and address the nutritional needs of adolescent girls, pregnant and lactating women and older persons.<sup>32</sup>
- 2.27 The SDGs commit to pursue these goals within the context of the *Rome Declaration on Nutrition and Framework for Action*, mentioned above, and broader human rights commitments under the *Universal Declaration of Human Rights*, other international human rights treaties, the *Millennium Declaration* and the 2005 World Summit Outcome Document.<sup>33</sup>

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30 WHO, 'Global Targets 2025: to Improve Maternal, Infant and Young Child Nutrition', <[who.int/nutrition/topics/nutrition\\_globaltargets2025/en/](http://who.int/nutrition/topics/nutrition_globaltargets2025/en/)> viewed 15 April 2016.

31 WHO, *Maternal, Infant and Young Child Nutrition: Development of the Core Set of Indicators: Report by the Secretariat*, Document A68/9, 68<sup>th</sup> World Health Assembly, 15 May 2015, p. 5.

32 United Nations (UN), *Transforming Our World: the 2030 Agenda for Sustainable Development*, Resolution A/RES/70/1, 70<sup>th</sup> Session, General Assembly, New York, 25 September 2015, p. 5.

33 UN Sustainable Development Knowledge Platform, *Transforming Our World: the 2030 Agenda for Sustainable Development*, paras 24; 10 <[sustainabledevelopment.un.org/post2015/transformingourworld](http://sustainabledevelopment.un.org/post2015/transformingourworld)> viewed 26 April 2016

## Aid spending on nutrition

- 2.28 Until very recently, the reporting of Official Development Assistance (ODA) spending on nutrition, and public disclosure of this information, differed widely among international donors. This situation has improved since the endorsement of the *Global Nutrition for Growth Compact*,<sup>34</sup> under which signatories (including Australia) agreed to adopt a common accountability framework for such reporting, including providing data for an annual publication detailing global and country-level nutrition programming and expenditure. The first of these publications was the *Global Nutrition Report 2014*.<sup>35</sup>
- 2.29 However, the establishment of the new reporting framework remains at an early stage and data on international donors' nutrition spending is still patchy at best. For example, for the *Global Nutrition Report 2015*, only eight of 13 donors provided all of the requested aid data (Australia, France, the Bill and Melinda Gates Foundation, Germany, Ireland, the Netherlands, Switzerland, and the United Kingdom), with three major donors (Canada, the European Union, and the World Bank) providing no disbursement data at all.<sup>36</sup>
- 2.30 International reporting on nutrition spending is generally separated into two aid investment categories:
- Nutrition-specific interventions:** Designed primarily to address immediate determinants of nutrition and development such as adequate food and nutrient intake, treatment of acute malnutrition, care-giving practices and reducing the burden of infectious diseases.
  - Nutrition-sensitive interventions:** Designed to address the underlying determinants of nutrition (which include household food security, care for mothers and children and primary health care services and sanitation) but not necessarily a predominant goal.<sup>37</sup>
- 2.31 Total ODA disbursements from all 29 members of the Development Assistance Committee (DAC) of the Organization for Economic Co-operation and Development (OECD) for nutrition-specific interventions nearly doubled between 2012 and 2013 – up from

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34 *Global Nutrition for Growth Compact*, London, 8 June 2013.

35 'Editorial: Feeding the World Sustainably', *Lancet*, Vol. 384, No. 9956, 15 November 2014, p. 1721.

36 IFPRI, *Global Nutrition Report 2015*, Washington DC, 2015, p. 62.

37 FAO, 'FAO Term Portal', <[www.fao.org/faoterm/en/](http://www.fao.org/faoterm/en/)> viewed 16 April 2016.

USD 0.56 billion to USD 0.94 billion. However, the OECD DAC's data shows that only 16 of its members reported nutrition-specific ODA spending greater than USD 1 million in 2013, and seven reported no nutrition-specific spending at all. The United States, Canada, Japan, the United Kingdom and the European Union, in that order, made the largest nutrition-specific disbursements during 2013.<sup>38</sup>

- 2.32 OECD DAC donors' spending on nutrition-sensitive ODA interventions totalled nearly USD 3 billion for 2013. However, the 2013 data from the European Union and World Bank were missing. The inclusion of these figures would likely put total nutrition-sensitive disbursements closer to USD 4 billion, or three per cent of global ODA. Total nutrition ODA spending (specific plus sensitive) would therefore be close to USD 5 billion, or four per cent of ODA.<sup>39</sup>
- 2.33 In Australia's case, 2014 nutrition-specific disbursement under the aid program was AUD 23.1 million (USD 20.9 million) and nutrition sensitive spending was AUD 97.0 million (USD 87.6 million).<sup>40</sup> Combined Australian ODA spending on both nutrition-specific and nutrition-sensitive interventions in 2014 was therefore AUD 120.1 million (USD 108.5 million) or 2.4 per cent of total Australian ODA.<sup>41</sup>

## Australia's policy settings

- 2.34 Australia's development policy, *Australian Aid: Promoting Prosperity, Reducing Poverty, Enhancing Stability* (launched by the Foreign Minister, the Hon Julie Bishop MP in June 2014), explicitly addresses nutrition under both the 'Agriculture, Fisheries and Water' and 'Education and Health' priority areas.<sup>42</sup> In particular, it states that Australia will strengthen its focus in this area as part of its commitments to improve

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38 IFPRI, *Global Nutrition Report 2015*, Washington DC, 2015, p. 62.

39 IFPRI, *Global Nutrition Report 2015*, Washington DC, 2015, p. 58.

40 Based on figures provided by DFAT at the Sub-Committee's request, and also reported in: IFPRI, *Global Nutrition Report 2015*, Washington DC, 2015, p. 145.

41 Based on total Australian ODA figures for the 2013–14 and 2014–15 financial years, which stood at approximately AUD 5.0 billion (actual expenditure) for both years, as reported in: DFAT, *2015–16 Development Assistance Budget Summary: Mid-Year Economic and Fiscal Outlook Update*, Canberra, February 2016, p. [3]; and DFAT, *Australia's International Development Assistance: Statistical Summary 2013–14*, Canberra, February 2015, p. 3.

42 DFAT, *Submission 12*, p. 35.

- child and maternal health and to prevent and manage non-communicable diseases (NCDs).<sup>43</sup>
- 2.35 The Government's *Strategy for Australia's Aid Investments in Agriculture, Fisheries and Water* (released in February 2015) also lists 'enhanced food, nutrition and water security' among its strategic objectives.<sup>44</sup>
- 2.36 In addition, over the past year DFAT has published five operational guidance notes (intended primarily as internal advice for department staff to assist with the design and implementation of aid investments) of particular relevance to nutrition, including:
- *Social Protection and Nutrition* (April 2015);<sup>45</sup>
  - *Nutrition-Sensitive Agriculture* (August 2015);<sup>46</sup>
  - *Getting the Foundations Right: Early Childhood Development and Australia's Aid Program* (September 2015);<sup>47</sup>
  - *Nutrition and Health in Australia's Aid Program* (December 2015);<sup>48</sup> and
  - *Nutrition in Australia's Aid Program* (December 2015).<sup>49</sup>
- 2.37 Separately, the Office of Development Effectiveness (ODE) conducted an evaluation of the quality of Australia's nutrition investments under the aid program, the results of which were subsequently detailed in its report, *A Window of Opportunity: Australian Aid and Child Undernutrition*, released in April 2015. The report's recommendations are considered further in Chapter five.

## Australian funded aid programs focused on nutrition

- 2.38 Australia allocates most nutrition funding to nutrition-sensitive interventions that aim to address the underlying causes of undernutrition. Over half of this work is undertaken in the rural development and food

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43 DFAT, *Australian Aid: Promoting Prosperity, Reducing Poverty, Enhancing Stability*, Canberra, June 2014, p. 22.

44 DFAT, *Strategy for Australia's Aid Investments in Agriculture, Fisheries and Water*, Canberra, February 2015, pp. 6–7.

45 *Exhibit 28: DFAT, Guidance Note: Social Protection and Nutrition*, Canberra, April 2015.

46 *Exhibit 27: DFAT, Operational Guidance Note: Nutrition-Sensitive Agriculture*, August 2015.

47 *Exhibit 23: DFAT, Getting the Foundations Right: Early Childhood Development and Australia's Aid Program, Operational Guidance Note*, September 2015.

48 *Exhibit 22: DFAT, Nutrition and Health in Australia's Aid Program, Operational Guidance Note*, December 2015.

49 *Exhibit 21: DFAT, Nutrition in Australia's Aid Program, Operational Guidance Note*, December 2015.

security sector, with the remaining funding delivered mainly through the humanitarian, emergency and refugee sector and the health sector.<sup>50</sup>

2.39 A small proportion of Australian nutrition funding is allocated to nutrition-specific interventions, reflecting the fact that very little health sector expenditure has a nutrition focus. Most nutrition-specific interventions are delivered through child and maternal health activities.<sup>51</sup>

2.40 Some examples of both nutrition-specific and nutrition-sensitive programs that are currently being supported under the Australian aid program are summarised below:

### Nutrition-specific programs and partnerships<sup>52</sup>

- Australia contributes to the **World Food Programme (WFP)**, which plays a critical role in the international response to crises through the provision of food assistance and logistics and telecommunications support, as well as working to improve nutrition globally. Support under this investment in 2014–15 included core funding for the WFP’s global operations (AUD 40 million), as well as dedicated support to school feeding activities in the Indo–Pacific region (AUD 10 million).
- In 2014–15, Australia’s AUD 35 million core contribution to the **United Nations Children’s Fund (UNICEF)** supported UNICEF to achieve its mandate to protect and promote the right of children, improve child health and nutrition, protect children from violence, exploitation and HIV, and work to expand children’s opportunities to reach their full potential.
- Australian aid funding, worth AUD 41 million over four years, is currently supporting the World Bank’s **Pakistan Project for Improved Nutrition Multi Donor Trust Fund (MDTF)**. The MDTF was established to better support nutrition interventions for children and mothers in Pakistan. The Bank is establishing International Development Association (IDA) loans for nutrition projects in Pakistan’s Sindh and Punjab provinces. The MDTF will complement these IDA loans and allow nutrition interventions to be implemented at scale nationally; ensuring that smaller, less well-resourced provinces can finance programs based on their nutrition strategies, thus enabling Pakistan to sustain an effective response to malnutrition.

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50 Office of Development Effectiveness (ODE), *A Window of Opportunity: Australian Aid and Child Undernutrition*, Canberra, April 2015, p. 2.

51 ODE, *A Window of Opportunity: Australian Aid and Child Undernutrition*, Canberra, April 2015, p. 2.

52 *Exhibit 25: DFAT, Australian Nutrition Specific ODA 2014–15.*

- Australian aid funding, worth AUD three million over three years, is helping UNICEF to deliver the **Nutrition Support Project** in Sri Lanka. This initiative is supporting elements of the Government of Sri Lanka's (GoSL) *Multi-sector Action Plan for Nutrition*. It adopts a systems approach to nutrition that seeks to strengthen the capacity of government systems to deliver evidence-based equitable nutrition interventions to mothers and children. Specifically, the project aims to equip the GoSL's National Nutrition Secretariat with a wide range of evidence and tools that can be used to drive policy reforms leading to reduction of undernutrition.
- The Indonesian, Australian and Canadian governments, in co-operation with the Ottawa-based Micronutrient Initiative (MI), are jointly supporting a new program on nutritional improvement aimed at enhancing the health and productivity of pregnant women and children in Indonesia's East Java and East Nusa Tenggara provinces. The program, named **Micronutrient Supplementation for Reducing Mortality and Morbidity in Indonesia (MITRA)**, is intended to improve the health and nutrition of around one million women and children in the two provinces.<sup>53</sup> In 2014–15, DFAT contributed AUD 0.8 million to the initiative.

### Nutrition-sensitive programs and partnerships<sup>54</sup>

- The **TOMAK – Farming for Prosperity Program** in Timor-Leste represents DFAT's first agricultural development program to be designed with explicit nutrition objectives. In particular, it focuses on promoting good nutrition through increasing dietary diversity, improving agricultural practices to ensure a year-round supply of locally-available nutritious food, and empowering women. This five-year, AUD 25 million investment was designed with support from the Seeds of Life Program (Australian Centre for International Agricultural Research Centre – ACIAR and the University of Western Australia – see below) and Commonwealth Scientific and Industrial Research Organisation (CSIRO), through the Food Systems Innovation (FSI) initiative.
- Australia supports the **Global Agriculture and Food Security Program (GAFSP)**, a World Bank-managed multilateral mechanism that emerged out of the G8 and G20 processes to boost investment in

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53 S M Waradji, 'Ensuring Pregnant Women, Children are Well Nourished', *The Jakarta Post*, 15 February 2016, <[www.thejakartapost.com/news/2016/02/15/ensuring-pregnant-women-children-are-well-nourished.html](http://www.thejakartapost.com/news/2016/02/15/ensuring-pregnant-women-children-are-well-nourished.html)> viewed 16 April 2016.

54 These examples are drawn from: DFAT, *Submission 12*, Annex A, pp. 43–47.

agriculture and food and nutrition security. Around 13 per cent of GAFSP's USD 912 million Public Sector Window portfolio is targeted towards nutrition-related activities. Over two thirds of this is for nutrition-sensitive agriculture activities, while the remainder includes nutrition activities beyond the agriculture sector, such as behavioural change communication campaigns and efforts to improve home conditions.

- Australia (together with Canada, the UK, the US and the Bill and Melinda Gates Foundation) is a partner in **AgResults**, a G20 initiative driving private sector-led agricultural development, research and delivery for smallholder farmers by rewarding businesses for achieving pre-defined development results. Through a number of pilot projects, AgResults is working with private sector actors across multiple agricultural value chains in Africa and Asia. These pilots are: driving widespread adoption of existing technologies to: increase agricultural productivity; improving farm incomes, human nutrition and on-farm storage of grain; and improve livestock health and farm management practices. On nutrition, for example, AgResults is currently piloting a biofortification project in Zambia.<sup>55</sup>
- Australia's **Seeds of Life Program** – implemented by the University of Western Australia and funded by both DFAT and ACIAR, has worked within Timor-Leste's Ministry of Agriculture and Fisheries (MAF) since 2000 to improve food security through increased productivity of major food crops. With support from the program, the MAF launched a national seed system in June 2013 that will provide farming families with enough quality seeds of proven food crop varieties to plant each year.<sup>56</sup>
- Through the **DFAT–CSIRO Africa Food Security Initiative**, DFAT is funding CSIRO's partnership with the Biosciences eastern and central Africa (BeCA) research hub in Nairobi. This partnership aims to strengthen the capacity of the hub, and of African scientists, in using modern biosciences for food and nutritional security. Some of the projects undertaken by the partnership include: promoting the adoption and commercialisation of highly-nutritious crops such as vegetable and grain amaranth; addressing aflatoxin contamination in maize; and developing vaccines and sustainable control strategies for livestock diseases.

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55 DFAT, *Submission 12*, p. 36.

56 DFAT, *Submission 12*, p. 36.



## Nutrition and health: a looming crisis in the Pacific region

3.1 As discussed in Chapter one, malnutrition is a global problem of enormous scale. According to Care Australia around 795 million people in the world today are hungry.<sup>1</sup> Results International told the Sub-Committee that:

Malnutrition in all its forms is directly or indirectly responsible for approximately 3 million of the 6 million deaths of children under the age of 5 years each year, making it one of the largest causes of child mortality.<sup>2</sup>

3.2 The *Global Nutrition Report 2015* has noted that despite the incentives to overcome malnutrition, such as to support economic growth, it 'is a problem of staggering size – large enough to threaten the world's sustainable development ambitions.'<sup>3</sup>

3.3 Yet global malnutrition is not a consequence of a global food shortage. The World Food Programme (WFP) tells us that '[t]he world produces enough to feed the entire global population of 7 billion people'.<sup>4</sup> At the same time, approximately one in nine people around the world do not have enough food to lead a healthy, active life while approximately 1.9 billion adults

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1 Care Australia, *Submission 10*, p. 6, also see Department of Foreign Affairs and Trade (DFAT) *Submission 12*, p. 3. See also World Food Programme (WFP), 'What Causes Hunger?' 'What Causes Hunger' <[www.wfp.org/hunger/causes](http://www.wfp.org/hunger/causes)> viewed 9 April 2016.

2 Results International (Australia), *Submission 5*, p. 5.

3 International Food Policy Research Institute (IFPRI), 'Executive Summary,' *Global Nutrition Report 2015 Actions and Accountability to Advance Nutrition and Sustainable Development*, 2015, p. xxi <[www.fao.org/fileadmin/user\\_upload/raf/uploads/files/129654.pdf](http://www.fao.org/fileadmin/user_upload/raf/uploads/files/129654.pdf)> viewed 11 April 2016.

4 WFP, 'What Causes Hunger', viewed 9 April 2016.

were estimated to be overweight and over 600 million were considered to be obese.<sup>5</sup>

- 3.4 The obesity epidemic afflicting industrialised societies has also become more prevalent in the developing world. A major study published in *The Lancet* reveals that: [t]he rise in global obesity rates over the last three decades has been substantial and widespread, presenting a major public health epidemic in both the developed and the developing world.<sup>6</sup>
- 3.5 Further, the World Health Organization (WHO) estimates that ‘contrary to conventional wisdom, the obesity epidemic is not restricted to industrial societies.’ Estimates by the WHO suggest over 115 million people in developing countries suffer from problems related to obesity.<sup>7</sup>
- 3.6 DFAT submitted that the ‘annual costs of undernutrition and micronutrient deficiencies are estimated at 2–3 per cent of global GDP, equivalent to USD 1.4 to 2.1 trillion per year.’<sup>8</sup>
- 3.7 The Indo–Pacific region is clearly faced with particularly serious and complex nutrition issues. To take one example, Sydney University’s submission noted that because of malnutrition:
- In Timor-Leste approximately 50 per cent of children suffer from stunting (growth and neurodevelopmental failure) due to malnutrition. More than 30 per cent of women suffer from chronic energy deficiency, and this is reflected in the high maternal mortality rate. The World Bank estimates that 11 per cent of gross national product in developing countries is lost annually due to malnutrition.<sup>9</sup>
- 3.8 The Sub-Committee acknowledges that Australia faces its own malnutrition and health challenges. Associate Professor Robyn Alders AO from the University of Sydney has highlighted Australian Health Survey (AHS) data which shows the prevalence of significant nutrition-related

5 The World Health Organization (WHO), ‘General Assembly proclaims the Decade of Action on Nutrition’ <[www.who.int/nutrition/GA\\_decade\\_action/en/](http://www.who.int/nutrition/GA_decade_action/en/)> viewed 10 April, 2016. See also WFP, ‘Hunger Statistics’ <[www.wfp.org/hunger/stats](http://www.wfp.org/hunger/stats)> viewed 12 April 2016.

6 CJL Murray and M Ng, ‘Nearly One-Third of the World’s Population is Obese or Overweight, New Data Show’ <[www.healthdata.org/news-release/nearly-one-third-world%E2%80%99s-population-obese-or-overweight-new-data-show](http://www.healthdata.org/news-release/nearly-one-third-world%E2%80%99s-population-obese-or-overweight-new-data-show)> viewed 11 April 2016. For a detailed breakdown on obesity increases see M Ng, T Fleming, M Robinson *et al*, ‘Global, Regional, and National Prevalence of Overweight and Obesity in Children and Adults During 1980–2013: A Systematic Analysis for the Global Burden of Disease Study 2013’, *The Lancet*, Vol. 384, No. 9945, 30 August 2014, pp. 766–81.

7 WHO, ‘Nutrition: Controlling the Global Obesity Epidemic’ <[www.who.int/nutrition/topics/obesity/en/](http://www.who.int/nutrition/topics/obesity/en/)> viewed 9 April 2016.

8 DFAT, *Submission 12*, p. 33.

9 The University of Sydney, *Submission 46*, p. 7.

problems across Australia's population. During 2011–12, 62.8 per cent of Australians aged 18 years and over were estimated to be overweight or obese, with 35.3 per cent being considered overweight while 27.5 per cent were considered obese.<sup>10</sup> Assoc. Professor Alders also contrasts Australia with some of our neighbours:

Our modern food system is a double-edged sword: delivering chronic under-nutrition due to shortages of nutritious food, and chronic obesity due to overconsumption. In Australia, we're living among 60 per cent of adults and 25 per cent of children who are overweight or obese. But if you live next door in Timor-Leste, you face a childhood stunting rate of 60 percent, due to malnutrition.<sup>11</sup>

- 3.9 This co-existence and contrast between people suffering undernutrition and others experiencing overconsumption is also apparent within many countries, communities and even families in our region.<sup>12</sup> DFAT's submission noted that:

Among several of our regional neighbours, including Timor-Leste, Papua New Guinea, Pakistan, Laos and Cambodia, stunting exceeds 40 per cent of children under the age of five. Moreover, a number of partner countries, particularly in the Pacific, face the so-called double burden of malnutrition – that is, hunger co-exists with obesity, and/or nutrition related non-communicable diseases (NCDs), such as type 2 diabetes and coronary heart disease. This problem has significant health, social and economic implications for families, local communities and the region more broadly.<sup>13</sup>

- 3.10 This 'double burden' of malnutrition in the Indo-Pacific and, in particular, in the Pacific Island countries is the main focus of this chapter. This emphasis reflects Australia's status as the leading provider of development assistance to Pacific Island countries, in seeking to support sustainable economic and social development through bilateral and regional programs. Australia's official development assistance (ODA) in 2015–16 now places the Pacific as the largest Australian aid recipient (AUD 1.1 billion).<sup>14</sup>

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10 *Exhibit 13: R Alders, 'Peak Food and our Quest for an Ethical and Ecologically Sustainable Human Diet', Proceedings of the Australian Poultry Science Symposium, Vol. 27, pp. 9–13.*

11 *Exhibit 10: R Alders, 'Feeding the World: Addressing Gender Divides Could Help Reduce Malnutrition', The Conversation, September 25, 2013, p. 1.*

12 The Global Alliance for Improved Nutrition (GAIN), 'Why We Need to Care about the Double Burden of Malnutrition' <[www.gainhealth.org/knowledge-centre/accountable-double-burden-malnutrition/](http://www.gainhealth.org/knowledge-centre/accountable-double-burden-malnutrition/)> viewed 11 April 2016.

13 DFAT, *Submission 12*, p. 3.

14 DFAT, *2015–16 Development Assistance Budget Summary: Mid-Year Economic and Fiscal Outlook Update*, February 2016, p. 4. See also J Hayward-Jones, 'Australia's Pacific Aid Budget Spared

- 3.11 The significance of the double burden has been assessed by economist and expert on nutrition and food security issues, Professor Lawrence Haddad:

The saying goes ‘when tomorrow’s burden is added to the burden of today, the weight becomes more than anyone can bear’. This is precisely the situation the countries of South East Asia and the Pacific are facing today. They already have some of the highest undernutrition rates in the world and now they are having to deal with premature death, diabetes, hypertension and heart disease due to another variant of malnutrition caused by diets high in fat, sugar and salt – often associated with the consumption of highly processed foods.<sup>15</sup>

- 3.12 This chapter presents an overview of evidence received by the Sub-Committee on the issues relating to under and over nutrition within Pacific neighbour countries.

### Malnutrition: global problem, Indo–Pacific dimensions

- 3.13 Malnutrition is a term used to describe inadequate or poor nourishment. It is a term that is generally applied to both undernutrition and its associated conditions such as stunting, as well as overnutrition where dietary intake is in excess of requirements. Conditions that are associated with over nutrition include being overweight and obese and related health problems including diabetes and heart disease.<sup>16</sup>
- 3.14 The problem of high rates of global malnutrition is not new. The world has been trying to solve the problem of undernutrition for decades. In 1974, the United States Secretary of State Henry Kissinger told the first world food conference in Rome that ‘no child would go to bed hungry in ten years.’<sup>17</sup>
- 3.15 Four decades later there has been considerable progress in reducing malnutrition in the form of undernourishment. However, for the poor and

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from Serious Cuts’, *The Interpreter* <lowyinterpreter.org/post/2015/05/13/Australia-aid-budget-Pacific-spared-serious-cuts.aspx> viewed 11 April 2016.

- 15 Professor Lawrence Haddad is Director of the Institute of Development Studies in Sussex, United Kingdom (UK). For reference see L Haddad, ‘The Double Malnutrition Burden: Time for Australia to Lead’, *Development Policy Centre Blog*, 7 March 2014 <www.devpolicy.org/the-double-malnutrition-burden-time-for-australia-to-lead-20140307/> viewed 7 April 2016.
- 16 World Hunger Education Service, ‘2015 World Hunger and Poverty Facts and Statistics’, viewed 13 April 2016.
- 17 *The Economist*, ‘How to Feed the World’, 19 November 2009 <www.economist.com/node/14915144> viewed 2 April 2015.

for developing nations the costs of hunger and malnutrition remain particularly high.<sup>18</sup>

- 3.16 DFAT's Office of Development Effectiveness (ODE), for example, produced a major report on the aid implications of child undernutrition in 2015. This report, entitled *A Window of Opportunity: Australian Aid and Child Undernutrition*, supported international findings that without access to proper nutrition to support a child's growth over the first 1 000 days of life, the long term health and developmental impediments are likely to be irreversible.<sup>19</sup> The report further noted that:

In 2013, about half of all stunted children lived in Asia and over one third in sub-Saharan Africa. In Asia, most of the children affected by stunting (62.5 million) are in South Asia – Bangladesh, India, Nepal and Pakistan in particular. Lower but still large numbers of stunted children live in Southeast Asia (16 million), particularly Indonesia where it has proved difficult to achieve improvement.<sup>20</sup>

- 3.17 Of particular relevance to Australia, the ODE report noted the prevalence of stunting in Oceania, where overall stunting rates in 2013 were the highest in the world, at 39 per cent.<sup>21</sup> More recently, slow progress against Millennium Development Goal (MDG) 1, to eradicate extreme poverty and hunger, saw the proportion of undernourished people in Oceania fall only 1.5 per cent – from 15.7 to 14.2 per cent of the total population – between 1992 and 2016.<sup>22</sup>
- 3.18 Results International (Australia) drew attention to the persistence of high rates of stunting in Papua New Guinea, which the organisation puts at 49 per cent and in Timor-Leste at 58 per cent. Results International observed that '[t]his means more than half of an entire generation of

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18 World Hunger Education Service, '2015 World Hunger and Poverty Facts and Statistics,' <[www.worldhunger.org/articles/Learn/world%20hunger%20facts%202002.htm](http://www.worldhunger.org/articles/Learn/world%20hunger%20facts%202002.htm)> viewed 5 April 2016.

19 DFAT, Office of Development Effectiveness (ODE), *A Window of Opportunity: Australian Aid and Child Undernutrition*, April 2015, p. 11 <[dfat.gov.au/aid/how-we-measure-performance/ode/Documents/a-window-of-opportunity-australian-aid-and-child-undernutrition-2015.pdf](http://dfat.gov.au/aid/how-we-measure-performance/ode/Documents/a-window-of-opportunity-australian-aid-and-child-undernutrition-2015.pdf)> viewed 26 April 2016.

20 DFAT, ODE, *A Window of Opportunity: Australian Aid and Child Undernutrition*, April 2015, p. 11, viewed 26 April 2016.

21 DFAT, ODE, *A Window of Opportunity: Australian Aid and Child Undernutrition*, April 2015, p. 11, viewed 26 April 2016.

22 From 15.7 per cent in 1990–1992 to 14.2 per cent in 2014–2016 'Oceania', *Millennium Goals Report 2015: Fact Sheet*, <[www.un.org/millenniumgoals/2015\\_MDG\\_Report/pdf/MDG%202015%20PR%20Key%20Facts%20Regional.pdf](http://www.un.org/millenniumgoals/2015_MDG_Report/pdf/MDG%202015%20PR%20Key%20Facts%20Regional.pdf)> viewed 26 April 2016.

children in these countries will fail to reach their full physical or mental potential.’<sup>23</sup>

3.19 The prevalence of stunting in our region, with its accompanying long term health and developmental implications would seem to present a significant burden to future growth in itself; however, at the same time, economic development in the Pacific region has been accompanied by sharp rises in the incidence of overnutrition and its associated health problems.

3.20 In its submission to the inquiry, DFAT, for example, highlighted the incidence of the double burden in Australia’s immediate region, noting, ...in the Solomon Islands, 33 per cent of children are stunted and 39 per cent of women are obese, while in Indonesia, 39 per cent of children (under five) are stunted and 12 per cent of children (under five) are overweight.<sup>24</sup>

3.21 The submission further explained the phenomenon of the double burden in our region:

In many of our partner countries, the double burden of malnutrition is experienced as societies undergo a nutrition transition, with rising incomes associated with changes in diet and physical activity. This in turn results in increased prevalence of obesity. In rural areas, increased mechanisation of farm activity leads to reduced physical activity at the same time that more - but not necessarily better quality – food becomes available. Traditional diets featuring grains and vegetables are giving way to calorie-dense and processed foods that are high in fat and sugar.<sup>25</sup>

## Causes of malnutrition—a brief overview

3.22 In discussion of the complexity around the causes of malnutrition, in particular undernourishment, Assoc. Professor Alders noted:

For the greater part of the 20th century, undernourishment was misdiagnosed as a lack of food, and agricultural activity worked to rectify it by increasing food production and agricultural productivity. The yields of maize, wheat and rice all increased. But with increasing yields came decreased nutritional diversity.<sup>26</sup>

23 Results International (Australia), *Submission 5*, pp. 5–6.

24 DFAT, *Submission 12*, p. 33.

25 DFAT, *Submission 12*, p. 34.

26 *Exhibit 10: R Alders, ‘Feeding the World: Addressing Gender Divides could Help Reduce Malnutrition’, The Conversation*, September 25, 2013, p. 2. For background information on the

- 3.23 Professor Alders argues that mixed farming is crucial; just producing more food does not necessarily address the issues of malnutrition.<sup>27</sup> Essential micronutrients, such as zinc, vitamin A and iron are required in diets and can be sourced from the production of eggs and poultry in combination with sufficient calories for optimal growth and health.<sup>28</sup>
- 3.24 There are many causes and factors that contribute to why people are undernourished. It is clear that just as the term malnutrition encompasses a diverse range of conditions its causes and causal links are equally diverse.
- 3.25 Like the condition of malnutrition itself, many of these causes are not new. As the FAO points out, the main causes of most nutrition problems have remained the same for over the past 50 years:
- Poverty, ignorance and disease, coupled with inadequate food supplies, unhealthy environments, social stress and discrimination, still persist unchanged as a web of interacting factors which combine to create conditions in which malnutrition flourishes.<sup>29</sup>
- 3.26 Adverse health outcomes for mothers and babies, such as low birth weights and maternal mortality, are linked to a maternal history of stunting and micronutrient malnutrition.<sup>30</sup> The WHO links malnutrition to approximately 45 per cent of child deaths under five.<sup>31</sup> Overweight or obese woman are also at greater risk of medical complications during pregnancy including pre-eclampsia and gestational diabetes. For children born to obese women research suggests they are at greater risk of a higher birth weight and of being insulin resistant, which may cause diabetes and obesity to develop later in life.<sup>32</sup>

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history of nutritional strategies see FAO, 'Human Nutrition in the Developing World' <[www.fao.org/docrep/w0073e/w0073e03.htm](http://www.fao.org/docrep/w0073e/w0073e03.htm)> viewed 12 March 2016.

27 *Exhibit 17*: R Alders, 'Why Mixed Family Farming is Crucial', pp. 1-2.

28 *Exhibit 15*: R Alders, A Aongolo, B Bagnol *et al*, 'Using a One Health Approach to Promote Food and Nutrition Security in Tanzania and Zambia', *GRF Davros Planet@Risk, Vol. 2, No.3, Special Issue on One Health (Part I/II)*, April, 2014, p. 188.

29 FAO, 'Human Nutrition in the Developing World', <[www.fao.org/docrep/w0073e/w0073e03.htm](http://www.fao.org/docrep/w0073e/w0073e03.htm)> viewed 12 March 2016.

30 1 000 Days, 'Stunting' <[//thousanddays.org/the-issue/stunting/](http://thousanddays.org/the-issue/stunting/)> viewed 11 April 2016.

31 WHO, 'Children: Reducing Mortality', updated January 2016 <[www.who.int/mediacentre/factsheets/fs178/en/](http://www.who.int/mediacentre/factsheets/fs178/en/)> viewed 11 April 2016.

32 H Grieve, J Busch-Halen, K Mellor, 'Undernutrition in Pacific Island Countries: An Issue Requiring Further Attention', Women's and Children's Health Knowledge Hub, *Compass*, May 2013 <[www.wchknowledgehub.com.au/sites/default/files/PB\\_Grieve\\_May2013.pdf](http://www.wchknowledgehub.com.au/sites/default/files/PB_Grieve_May2013.pdf)> viewed 11 May 2016.

- 3.27 The causes of malnutrition can also be linked to factors that go beyond poverty and food availability. As the FAO points out, poor nutrition can be related to a lack of status and to cultural norms.<sup>33</sup>
- 3.28 For example, women in some cultures eat last,<sup>34</sup> have little control over house hold expenditure<sup>35</sup> and through lack of education may well lack knowledge about what constitutes good nutrition and what foods are best to feed their families.<sup>36</sup> The FAO further notes that '[s]ocial and economic inequalities between men and women often stand in the way of good nutrition.'<sup>37</sup>
- 3.29 Poverty is, nevertheless, clearly associated with undernutrition. Action Against Hunger noted that '[o]ver 90 per cent of malnourished people live in developing countries.' Food and nutritional crises often arise when the poor people are unable to access or obtain food.<sup>38</sup>
- 3.30 The WFP notes that if poor people cannot afford nutritious food or the seeds or tools to grow it, they can become weak and less able to work affecting their ability to escape from poverty.<sup>39</sup>
- 3.31 Poverty can hinder the ability to build food security in communities. Just as it is important to note evidence that suggests a link between malnutrition and poverty, there is also a link between good nutrition and economic growth. The *Global Nutrition Report 2015* makes the point that:
- When peoples' nutritional status improves, it helps break the intergenerational cycle of poverty, generates broad-based

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33 FAO, 'Gender and Nutrition', <[www.fao.org/docrep/012/al184e/al184e00.pdf](http://www.fao.org/docrep/012/al184e/al184e00.pdf)> viewed 26 April 2016. See also ChildFund Australia, *Submission 1*, p. 3.

34 Unicef, 'Matter of Magnitude', The Impact of the Economic Crisis on Women and Children in South Asia, June 2009, <[www.unicef.org/rosa/Latest\\_Matter\\_of\\_magnitude.pdf](http://www.unicef.org/rosa/Latest_Matter_of_magnitude.pdf)> p. 7.

35 ChildFund Australia, *Submission 1*, p. 3

36 Dr Kuntala Lahiri-Dutt, *Submission 35*, p. 2. The need to educate parents on nutrition was noted by Mr Marcus Howard, Acting Assistant Secretary, Health and Water Branch, Development Policy Division, DFAT, *Proof Committee Hansard*, Canberra, 22 February, 2016, p. 8. For the importance of the education of women and nutrition see WHO, Western Pacific Region, *Integrating Poverty and Gender into Health Programmes, A Sourcebook for Health Professionals, Module on Nutrition*, 2007, p. 15 <[www.wpro.who.int/publications/docs/Nutritionmodule2.pdf](http://www.wpro.who.int/publications/docs/Nutritionmodule2.pdf)> viewed 12 April 2016.

37 FAO, 'Gender and Nutrition' <[www.fao.org/docrep/012/al184e/al184e00.pdf](http://www.fao.org/docrep/012/al184e/al184e00.pdf)> viewed 26 April 2016. See also ChildFund Australia, *Submission 1*, p. 3.

38 Action Against Hunger, ACF International, 'Underlying Causes of Malnutrition', <[www.actioncontrelafaim.ca/what-is-acute-malnutrition/underlying-causes-of-malnutrition/](http://www.actioncontrelafaim.ca/what-is-acute-malnutrition/underlying-causes-of-malnutrition/)> viewed 12 March 2016.

39 WFP, 'What Causes Hunger?', viewed 7 April 2016.

economic growth, and leads to a host of benefits for individuals, families, communities, and countries.<sup>40</sup>

- 3.32 DFAT noted that 'poverty is inextricably tied to food security, with the poor spending more than half of their income on food. This makes them particularly vulnerable to sudden food price increases.'<sup>41</sup>
- 3.33 Food security is a term used to describe the availability of safe and nutritious food to all persons at all times.<sup>42</sup> It links together physical, social and economic access to sufficient, safe and nutritious foods to meet their dietary needs and food preferences for an active and healthy life.<sup>43</sup>
- 3.34 As the submission from the Pacific Island Forum's Office of the Chief Trade Adviser (OCTA)<sup>44</sup> points out:
- Food security at the household level can be realised either by production or purchase of food, with agriculture contributing to both. However, production is often hampered by challenges leading to low productivity, including land access, soil quality, water, pest and diseases, inputs, natural disasters and climate change. On the other hand, the capacity to purchase food may be limited by income due to challenges arising from lack of market access and competitiveness as a result of low productivity, quality and consistency of supply, quarantine issues, infrastructure and equipment, information and communications, business skills, finance and credits.<sup>45</sup>
- 3.35 Given the inquiry terms of reference, agriculture was a major focus in many submissions. Evidence focused on agriculture as a means to address poverty, malnutrition and to improve economic wellbeing in our region. DFAT pointed out that agricultural development is 'the most direct route to improving diets (quantity and quality), ensuring year-round access to adequate, safe, nutrient-rich food.'<sup>46</sup>

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40 FAO, *Global Nutrition Report 2015. Actions and Accountability to Advance Nutrition and Sustainable Development* <[www.fao.org/family-farming/detail/en/c/357395/](http://www.fao.org/family-farming/detail/en/c/357395/)> viewed 11 April 2016.

41 DFAT, *Submission 12*, p. 3.

42 Office of the Chief Trade Adviser (OCTA-PIF), *Submission 7*, p. 4.

43 WHO, 'Trade, Foreign Policy, Diplomacy and Health' <[www.who.int/trade/glossary/story028/en/](http://www.who.int/trade/glossary/story028/en/)> viewed 8 April 2016.

44 OCTA-PIF (*Submission 7*) is based in Port Vila, Vanuatu. It provides independent advice and support to the Pacific Island Countries (PICs) in negotiations of PACER Plus with Australia and New Zealand. OCTA is fully owned and under exclusive control of the Pacific Island Countries. <[www.octapic.org/about/general-information/](http://www.octapic.org/about/general-information/)> viewed 7 April 2016.

45 OCTA-PIF, *Submission 7*, p. 4.

46 DFAT, *Submission 12*, p. 34.

- 3.36 Agriculture production not only produces food, but can also be a source of income. Greater agricultural productivity can help to lower food prices. Agricultural productivity contributes to a country's macro-economic growth and food security.<sup>47</sup> With men migrating for paid work, empowering rural women in agriculture is now seen as vital to achieve nutrition goals. The relationship between agriculture, nutrition and women in reducing malnutrition are examined in Chapter four of this report.
- 3.37 The FAO notes that 'many conflict situations are characterised by widespread malnutrition and death among vulnerable groups (children, women, and the elderly).'<sup>48</sup> Military conflicts, civil disturbances, and environmental disasters can also affect food security, when people are displaced from their land and sources of income.<sup>49</sup>
- 3.38 Climate change has also been linked with malnutrition.<sup>50</sup> Care Australia, for example, advised:
- According to the IPCC, climate change will have a substantial impact on per capita calorie availability, malnutrition, and related child deaths in developing countries.<sup>51</sup>
- 3.39 DFAT's submission considered that:
- At least in the medium term, ongoing food and water security concerns in our region are also expected to be compounded by the return of the El Nino weather event. Previous El Nino episodes have caused climatic variations with significant impacts on agriculture and consequent implications for food security.
- The last two severe episodes – in 1997–98 and 1982–83 – resulted in significant crop damage and a surge in food prices. A number of meteorological authorities worldwide have predicted that the current event will be the strongest on record.<sup>52</sup>

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47 DFAT, *Submission 12*, p. 34.

48 FAO, 'Impact of Armed Conflict on the Nutritional Situation of Children' <[www.fao.org/docrep/005/w2357e/W2357E02.htm](http://www.fao.org/docrep/005/w2357e/W2357E02.htm)> viewed 4 April 2016.

49 Action Against Hunger, ACF International, <[www.actioncontrelafaim.ca/what-is-acute-malnutrition/underlying-causes-of-malnutrition/](http://www.actioncontrelafaim.ca/what-is-acute-malnutrition/underlying-causes-of-malnutrition/)> viewed 12 April 2016.

50 Action Against Hunger, ACF International 'Underlying Causes of Malnutrition', <[www.actioncontrelafaim.ca/what-is-acute-malnutrition/underlying-causes-of-malnutrition/](http://www.actioncontrelafaim.ca/what-is-acute-malnutrition/underlying-causes-of-malnutrition/)> and see Care Australia, *Submission 10*, p. 6, which notes: 'changes in climate in the last 30 years have already reduced global agricultural production one to five per cent per decade and could reduce it by two per cent per decade for the rest of the century. Up to 600 million more people could be at risk of hunger by 2080 as a result.'

51 Care Australia, *Submission 10*, p. 6.

52 DFAT *Submission 12*, p. 4.

- 3.40 Weather induced disasters and changing weather patterns can affect infrastructure, water supplies and other basic amenities. Not having access to safe drinking water, poor sanitation and hygiene practices are also linked to the spread of diseases which in turn can result in malnutrition.<sup>53</sup>

### The high costs of malnutrition

- 3.41 The social, health and economic costs of the double burden in the region are considerable. A report by the United Nations Secretary-General commented that non-communicable diseases 'represent a new frontier in the fight to improve global health. Worldwide, the increase in such diseases means that they are now responsible for more deaths than all other causes combined.'<sup>54</sup>
- 3.42 Results International (Australia) cited World Bank estimates that undernutrition imposes significant economic costs:
- ...countries affected by undernutrition lose at least 2–3 per cent of their Gross Domestic Product, and incur billions of dollars in avoidable health care spending. Globally, the direct costs of undernutrition in children have been estimated at \$20–\$30 billion per year.<sup>55</sup>
- 3.43 Professor Haddad further highlighted the long term economic and social significance of the prevalence of malnutrition across the Indo-Pacific region:
- Unchecked, malnutrition will likely thwart economic ambitions. The countries of South East Asia and the Pacific are the first to have to deal with this problem in its most virulent form. Most other countries have had the time to deal with undernutrition before its twin, over nutrition, emerges. Not in this region. Indonesia, the regional power, is particularly worrying: good economic growth, some successes in poverty reduction, yet stunting rates that are flat lining at very high levels, with high and

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53 Action Against Hunger, ACF International 'Underlying Causes of Malnutrition' and see Results International (Australia), *Submission 5*, which notes that water, sanitation and hygiene are critical determinants for nutrition, p. 3.

54 United Nations, Report of the Secretary General, *Prevention and Control of Non-Communicable Diseases*, Sixty-sixth session, Summary, A/66/83, In 2008, 36 million people died from non-communicable diseases, representing 63 per cent of the 57 million global deaths that year. In 2030, such diseases are projected to claim the lives of 52 million people.

55 Results International (Australia), *Submission 5* p. 5.

increasing rates of overweight at the adult, and most worryingly, childhood levels.<sup>56</sup>

- 3.44 Rising health costs, losses in productivity and the tragic loss of human potential are all factors in what can be seen in the rising tide of Pacific malnutrition. Professor Haddad asks: '[h]ow on earth will Indonesia and the other countries in the region fulfil their economic aspirations?', and warns:

High quality longitudinal evidence confirms that the adult wage rates of young infants who were not stunted at 3 years of age was nearly 50 per cent higher than those who were stunted. And these individuals were 33 per cent less likely to live in poverty. That is just for undernutrition. Over nutrition costs are a time bomb waiting to happen. In the USA 1 in 5 health dollars is spent in treating diabetes. The USA has 22 million people suffering from diabetes; Indonesia has 7 million – imagine what the treatment costs will do to the Indonesian public health budget and the livelihoods of low income Indonesians. They are already crippling Pacific Island health budgets.<sup>57</sup>

## Malnutrition in the Pacific

- 3.45 A number of Australia's regional neighbours have both the highest levels of obesity among adults in the world and high rates of child undernutrition.<sup>58</sup> This double burden causes significant adverse health outcomes, as well as impacting on the ability of these countries' economic development.

- 3.46 Robert Oliver, chef, author and television presenter, drew attention succinctly to the severity of the problem for our Pacific Island neighbours:

...[t]he South Pacific is in crises. Every day, 2 Fijians have a limb removed due to diabetes, American Samoa, Nauru and the Cook Islands are the world's most obese nations – with Tonga and Samoa not far behind.<sup>59</sup>

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56 L Haddad, 'The Double Malnutrition Burden: Time for Australia to Lead,' *Development Policy Centre Blog*, viewed 11 March 2016.

57 L Haddad, 'The Double Malnutrition Burden: Time for Australia to Lead,' *Development Policy Centre Blog*, viewed 12 April 2016.

58 Professor M Toole, 'Stunted Growth and Obesity: the Double Burden of Poor Nutrition on our Doorstep,' *The Conversation* <[www.theconversation.com/stunted-growth-and-obesity-the-double-burden-of-poor-nutrition-on-our-doorstep-50385](http://www.theconversation.com/stunted-growth-and-obesity-the-double-burden-of-poor-nutrition-on-our-doorstep-50385)> viewed 7 March 2016.

59 Robert Oliver Enterprises, *Submission 47*, p. 6.

- 3.47 In general economic terms, the Asia–Pacific region has undergone rapid economic growth over the last two decades. As noted by the *Economic and Social Survey Report of Asia and the Pacific 2015*, this growth (although somewhat uneven) has improved the lives of millions of people.<sup>60</sup> However, as Professor of Economics Raghendra Jha observed to the Committee, an: ‘Increase in income does not necessarily mean improvement in nutritional status’.<sup>61</sup>
- 3.48 Professor Mu Li, Professor in International Public Health at the University of Sydney, told the Sub-Committee that she had reviewed the statistics for the top 10 countries receiving international development assistance from Australia, and concluded that:
- Twenty per cent of children under five in Vietnam had stunted growth, and the rate was above 30 per cent in the remaining nine countries. The clear standout was Papua New Guinea, which had a rate of 49.5 per cent. On the other hand the percentage of children under five who were overweight or obese in PNG is 13.8 per cent. This is the double burden we have been talking about. So we have to not only feed the people but feed them quality food that helps young bodies to grow. It needs strong multi-sectoral and government intervention on many fronts. Future programs need to consider how to combat the persistence of undernutrition and, on the other hand, the rise in the over nutrition problem.<sup>62</sup>
- 3.49 According to the WHO, non-communicable diseases or chronic diseases are now the leading cause of death around the world, killing more than 36 million people each year.<sup>63</sup> An ‘Outcomes Statement from the Joint Forum Economic and Pacific Health Ministers Making Growth More Inclusive for Sustainable Development Meeting’, held on 11 July 2014, announced ‘Pacific Island countries are in the midst of a Non-Communicable Disease (NCD) crisis’, and noted that ‘NCDs account for around 75 per cent of all deaths in the Pacific.’<sup>64</sup> The *Solomon Times Online*, in an article authored by the Pacific Islands Forum Secretariate, reported that common NCDs are cardiovascular disease and diabetes. Key

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60 United Nations ESCAP, ‘Making Growth more Inclusive for Sustainable Development’, <[www.unescap.org/sites/default/files/Economic%20and%20Social%20Survey%20of%20Asia%20and%20the%20Pacific%202015.pdf](http://www.unescap.org/sites/default/files/Economic%20and%20Social%20Survey%20of%20Asia%20and%20the%20Pacific%202015.pdf)> viewed 12 May 2016.

61 Professor Raghendra Jha, *Submission* 48, p. 1.

62 Professor Mu Li, Professor in International Public Health, University of Sydney, *Proof Committee Hansard*, Sydney, 11 March 2016, p. 26.

63 WHO, ‘10 Facts on Non-Communicable Diseases’ updated March 2013, <[www.who.int/features/factfiles/noncommunicable\\_diseases/en/](http://www.who.int/features/factfiles/noncommunicable_diseases/en/)> viewed 11 April 2016.

64 ‘Joint Forum Economic and Pacific Health Ministers Meeting Outcomes Statement’, Honiara, Solomon Islands, 11 July 2014, p. 1.

risk factors include: tobacco use, harmful use of alcohol and an unhealthy diet.<sup>65</sup>

- 3.50 A 2010 WHO Bulletin entitled 'Pacific Islanders Pay Heavy Price for Abandoning Traditional Diet' stated that:

About 40 per cent of the Pacific island region's population of 9.7 million has been diagnosed with a non-communicable disease, notably cardiovascular disease, diabetes and hypertension. These diseases account for three quarters of all deaths across the Pacific archipelago and 40–60 per cent of total health-care expenditure, according to a meeting on obesity prevention and control strategies in the Pacific held in Samoa in September 2000.<sup>66</sup>

- 3.51 Ian Anderson's discussion paper on non-communicable disease in the Pacific region, notes that Pacific Island countries also have high risk factors for acquiring NCDs:

Each of the ten countries in the Pacific for which data is available have 60 percent or more of the adult population that is overweight, and in six countries more than 75 per cent are overweight. In four countries of the Pacific at least half the adult population is obese. Obesity and being overweight often occur at young ages: nearly one in four boys and one in five girls in Tonga are obese. Other risk factors apart from weight are also significant in the Pacific. Over two-thirds of people in Kiribati smoke tobacco daily. Over 70 per cent of people in Cook Islands are physically inactive. Only 5 per cent of adult females and 10 per cent of adult males were free of any of the preventable risk factors for acquiring NCDs in Vanuatu.<sup>67</sup>

- 3.52 These risk factors feed a pipeline of future NCDs. Yet, at the same time, Pacific Island countries must still contend with providing treatment programs for 'communicable, maternal, neonatal and nutritional

65 *Solomon Times Online*, authored by Pacific Islands Forum Secretariat 'Pacific Ministers Commit to Fight against Non-Communicable Diseases (NCDs)', 11 July 2014 <[www.solomontimes.com/news/pacific-ministers-commit-to-fight-against-noncommunicable-diseases-ncds/8207](http://www.solomontimes.com/news/pacific-ministers-commit-to-fight-against-noncommunicable-diseases-ncds/8207)> viewed 11 April 2016.

66 WHO, Bulletin of the WHO, 'Pacific Islanders Pay Heavy Price for Abandoning Traditional Diet', 2010 <[www.who.int/bulletin/volumes/88/7/10-010710/en/](http://www.who.int/bulletin/volumes/88/7/10-010710/en/)> viewed 26 April 2016.

67 I Anderson, *The Economic Cost of Non-Communicable Diseases in the Pacific Islands: A Rapid Stocktake of the Situation in Samoa, Tonga, and Vanuatu*, Health Nutrition and Population (HNP) Discussion Paper, September 2013, p. 72 <[openknowledge.worldbank.org/bitstream/handle/10986/17851/865220WP0Econo0Box385176B000PUBLIC0.pdf?sequence=1&isAllowed=y](http://openknowledge.worldbank.org/bitstream/handle/10986/17851/865220WP0Econo0Box385176B000PUBLIC0.pdf?sequence=1&isAllowed=y)> viewed 26 April 2016.

conditions ...[which] typically still account for between 20 per cent and 25 per cent of all deaths.’<sup>68</sup>

- 3.53 One theory as to why obesity is such an issue in Pacific Island countries is that the Pacific Islanders are genetically pre-disposed to become obese. However, the WHO points to a link between the loss of traditional foods and the high prevalence of obesity and related health problems in the Pacific region. Chef Robert Oliver, in his submission, made reference to the observations of visiting American nutritionist Weston Price, to note the change since the 1940s, when Samoans had “near perfect physiques” ‘.<sup>69</sup>

### Dietary and lifestyle changes

- 3.54 Pacific Island diets have been transformed over the last few decades. The Secretariat of the Pacific Community in conjunction with CSIRO have observed that traditional diets in Pacific Island countries were:

...based on starchy root crops supplemented by coconuts, fish and sometimes livestock products. But these traditional foods are being replaced by imported foods (most notably in urban areas). In particular, white rice and refined flour, along with processed, usually tinned, meats and fish, which have become popular due to changed dietary preferences and ease of storage and preparation, even though imported foods are sometimes more expensive.<sup>70</sup>

- 3.55 This significant dietary change has included the introduction of popular, imported but high fat foods such as turkey tails and mutton flaps. Turkey tail is a term used to describe fatty meat that is not actually the tail of the turkey but the meat around the tail and includes the gland that provides oil that the birds use to preen their feathers. Turkey tails are marketed to Pacific Island countries by United States suppliers.<sup>71</sup>

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68 I Anderson, *The Economic Cost of Non-Communicable Diseases in the Pacific Islands. A Rapid Stocktake of the Situation in Samoa, Tonga and Vanuatu*, HNP Discussion Paper, September 2013, p. 3, viewed 26 April 2016.

69 WHO, *Bulletin of the WHO*, ‘Pacific Islanders Pay Heavy Price for Abandoning Traditional Diet’, 2010, viewed 12 April 2016; also see Robert Oliver Enterprises, *Submission 47*, p. 7.

70 ‘Food Security in the Pacific and East Timor and its Vulnerability to Climate Change’, prepared by the Australian Government Department of Climate Change and Energy Efficiency and by the Secretariat of the Pacific Community in Conjunction with the CSIRO, 2011, p. 2 <[www.environment.gov.au/system/files/pages/275228c5-24db-47f2-bf41-82ef42cda73d/files/food-security-report.pdf](http://www.environment.gov.au/system/files/pages/275228c5-24db-47f2-bf41-82ef42cda73d/files/food-security-report.pdf)> viewed 12 April 2016.

71 A Arbor, ‘A Tale of Turkey Tail: the Part of the Bird Best Left Uneaten’, Michigan University, Institute of Social Research, 13 November 2012, <[www.ns.umich.edu/new/multimedia/videos/20978-a-tale-of-turkey-tail-the-part-of-the-bird-best-left-uneaten](http://www.ns.umich.edu/new/multimedia/videos/20978-a-tale-of-turkey-tail-the-part-of-the-bird-best-left-uneaten)> viewed 2 April 2016.

- 3.56 Mutton flaps are meat from the ‘low-quality end of a sheep’s rib.’<sup>72</sup> It is estimated that every 100 grams of mutton flap includes approximately 40 grams of fat and contains around 420 calories. In Pacific Island countries these fatty cuts of meat are sometimes the only cut of the animal on sale.<sup>73</sup>
- 3.57 Robert Oliver suggests this diet is part of the ‘food colonisation’ of the Pacific, and was ‘formed after colonials arrived and decided that it would be a clever idea to foist unwanted leftover fatty meats onto island nations because they would be cheap and a great way to get rid of food that first nation’s people no longer wanted...’<sup>74</sup>
- 3.58 Fatty, salty or sugary foods are, however, also prized as tasty and high status foods.<sup>75</sup> Mr Oliver noted that imported, high fat meat products are highly popular in part because of community attitudes that ‘overseas is better’,<sup>76</sup> while fish and traditional staple foods have also increased in price.<sup>77</sup>
- 3.59 Robert Oliver highlighted the impact of dietary change in the South Pacific in his evidence to the Sub-Committee:
- Spam is not food. Neither are mutton flaps, turkey necks or instant noodles. But these are the foods the Pacific islands have embraced – and the results have undermined the health of their people, their economies and their environment.<sup>78</sup>
- 3.60 Mr Oliver further observed that two generations in the Pacific region have now been:
- ...raised under the umbrella of fast, processed and convenience foods. Small Pacific nations are vulnerable to the massive marketing campaigns of fast foods: marketing that is often passed

72 K Watson and S Treanor, ‘How Mutton Flaps are Killing Tonga’, *BBC News*, Tonga, 18 January 2016; see also D Gewerz and F Errington, ‘Cheap Meat: Flap Food Nations in the Pacific Islands’, 2010, University of California Press, and Australia and New Zealand sell ‘lamb or mutton flaps-sheep and sheep bellies to the Pacific Islands’, <[www.jstor.org/stable/10.1525/j.ctt1pnjgn](http://www.jstor.org/stable/10.1525/j.ctt1pnjgn)> viewed 12 April 2016.

73 K Watson and S Treanor, ‘How Mutton Flaps are Killing Tonga’, *BBC News*, Tonga, 18 January 2016, <[www.bbc.com/news/magazine-35346493](http://www.bbc.com/news/magazine-35346493)> viewed 12 April 2016.

74 Robert Oliver Enterprises, *Submission 47*, p. 8.

75 Ms Chakriya Bowman, Director, Pacific Economic Growth Section, Pacific Regional Branch, Pacific Division, DFAT, *Proof Committee Hansard*, 22 February, 2016, p. 2.

76 Robert Oliver Enterprises, *Submission 47*, p. 8.

77 Eliza Barclay, Radio Program, NPR, The Salt, ‘Samoans Await the Return of the Tasty Turkey Tail’, 9 May 2013 <[www.npr.org/sections/thesalt/2013/05/14/182568333/samoans-await-the-return-of-the-tasty-turkey-tail](http://www.npr.org/sections/thesalt/2013/05/14/182568333/samoans-await-the-return-of-the-tasty-turkey-tail)> viewed 4 April 2016.

78 Robert Oliver Enterprises, *Submission 47*, p. 2.

off as truth. NGO Health initiatives tend to have been packaged into reduced components – less sugar, less fat, less fried food.<sup>79</sup>

### Dietary preferences, economic change, trade and urbanisation

- 3.61 A recent BBC investigation entitled ‘How Mutton Flaps are Killing Tonga’ focused on what the program considered to be one of the main causes of obesity in that country: a ‘cheap, fatty kind of meat – mutton flaps – imported from New Zealand.’ Papiloa Foliaki from Tonga suggested some Tongan’s think something imported is superior, and goes on to say:

And you have a situation where fishermen spear their fish – sell it – and go and buy mutton flaps. People don’t have the education to know what is bad for their health.<sup>80</sup>

- 3.62 The BBC report highlighted the interaction of economic change, access to products from global suppliers, traditional social norms and a lack of adequate dietary education:

‘The bigger you are, that’s beauty,’ says Drew Havea, chair of the civil Society Forum of Tonga.<sup>81</sup>

- 3.63 Reverend Dr Ma’afu Palu ‘a minister who is making it his mission to preach healthier eating’, stated that:

The obesity epidemic is not solely down to mutton flaps and turkey tails. Lots of fatty canned meat is consumed – sometimes from giant 2.7 kg (96oz) tins. And then there are fizzy drinks.<sup>82</sup>

- 3.64 Deputy Chief Executive at the Ministry of Revenue and Customs, Lepaola Vaea, stated that:

‘You have to understand that in Tonga we are catching up’.

‘We used to watch American movies and TV shows and everyone was drinking soda. We sat there and thought, ‘Wow, I would love to drink soda and we’re poor because we’re drinking water.’ But now everyone’s drinking water and we are drinking soda!’

In 2008, Vaea tried to raise duty on mutton flaps, as Fiji has successfully done.

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79 Robert Oliver Enterprises, *Submission 47*, p. 7.

80 Papiloa Foliaki is one of the few Tongans over eighty, and is described as a former nurse, activist and politician, now working in the hotel business; see K Watson and S Treanor, ‘How Mutton Flaps are Killing Tonga’, *BBC News*, Tonga, 18 January 2016 <[www.bbc.com/news/magazine-35346493](http://www.bbc.com/news/magazine-35346493)> viewed 4 April 2016.

81 K Watson and S Treanor, ‘How Mutton Flaps are Killing Tonga’, *BBC News*, Tonga, 18 January 2016, viewed 12 April 2016.

82 K Watson and S Treanor, ‘How Mutton Flaps are Killing Tonga’, *BBC News*, Tonga, 18 January 2016, viewed 12 April 2016.

The result: 'There was a large public outcry,' she says.

'People are addicted.'

It says a lot about Tongan eating habits that a health food restaurant here serves fish and chips. But this really is healthier than a lot of Tongan dinners.<sup>83</sup>

- 3.65 In discussion with the Sub-Committee, Professor Guest also highlighted the complex factors underlying dietary change and adverse health trends in Pacific Island countries:

One of the things you see in the Pacific and Asia is a drift of young people, usually young men, away from the farms to the cities. That decreases the availability of labour – in particular, productive labour. That means farmers are getting older, as they are in Australia, so they are more prone to disease and illness and they are less productive. The young people leave, and that takes away the capacity to produce traditional food. They go to the cities. Of course, one of the greatest exports of the Pacific Islands is people. They come to Australia and New Zealand. They repatriate money to their home country. That money is used to buy fast food – turkey tails, lamb flaps and things like that – which is seen as prestigious. If you have to eat traditional foods you are clearly poor but if you can eat unhealthy foods you are wealthy! So we have this really unfortunate spiral where many of the countries are losing their capacity to produce healthy foods and that is being replaced by money coming in which allows people to buy imported products – essentially waste products – from Australia, New Zealand, the US and wherever. To me, that is one of the major contributors. It is not just advertising; it is the fact that there is this cultural shift – that eating these unhealthy imported foods is seen as prestigious.<sup>84</sup>

- 3.66 Countries in the Pacific region are trying to improve their diet. For instance, Fiji banned the sale of mutton flaps in 2000<sup>85</sup> but the product is reported to still be widely available under the alias of 'mutton carcass'. The Fiji Ministry of Health has pursued a community education program aimed at encouraging more nutritious eating by providing information

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83 K Watson and S Treanor, 'How Mutton Flaps are Killing Tonga', *BBC News*, Tonga, 18 January 2016, viewed 12 April 2016.

84 Professor David Guest, Professor of Plant Pathology, University of Sydney, *Proof Committee Hansard*, Sydney, 11 March 2016, p. 26.

85 J Gale, 'Pacific Nations Try to Restrict Imports of Fatty Foods', *Bloomberg Businessweek*, 23 November, 2011, p. 1.

about 'the negative aspects of animal fat and to [encourage a] switch to vegetable fat instead.'<sup>86</sup>

- 3.67 The World Bank has noted that diet-related non-communicable diseases are a very large health challenge in Samoa:

Around 85 per cent of the population is overweight, and 54 per cent is obese; and the incidence of diabetes and high blood pressure is high. These NCDs impose large – but often preventable – costs on the already overstretched Government health budget, and the economy more broadly.<sup>87</sup>

Real per capita expenditure on health care in Samoa is rising faster than real GDP per capita. Per capita consumption of fruits and vegetables in Samoa is very low by regional and global standards. There is a need for increased awareness of the dietary benefits of fruit and vegetable consumption. Furthermore, despite having a large subsistence agriculture sector, households remain very vulnerable to increases in food and fuel prices. A large share of the existing demand for fruits and vegetables is being met by imports.<sup>88</sup>

- 3.68 Against this background, Samoa banned the importation of turkey tails in 2007 as part of an effort to reduce consumption of imported high fat foods. Samoan Prime Minister Tuilaepa Sailele Malielegaoi observed in 2011 that: 'The turkey should bring its own tail to Samoa. It's no good somebody else chowing the turkey and then sending the tail to Samoa.'<sup>89</sup>

- 3.69 However, in 2013 Samoa was required to lift the prohibition. As part of an agreement to join the World Trade Organisation, Samoa 'was given one year to remove the ban, which violated WTO rules on targeting individual products.'<sup>90</sup> As a transitional measure Samoa was allowed to retain a two year a domestic ban on the sale of turkey tails and turkey tail products together with an import duty of 300 per cent. This was to allow time to develop and implement a programme promoting healthier diet and life style choices.<sup>91</sup> The domestic sale ban was to be lifted after two years 'and

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86 'Killer Flaps' *Fiji Times Online*, 11 May 2015 <[www.fijitimes.com/story.aspx?id=305312](http://www.fijitimes.com/story.aspx?id=305312)> viewed 15 April 2016.

87 The World Bank Group, *Submission 20*, pp. iii-5.

88 The World Bank Group, *Submission 20*, p. 5.

89 ABC News, 'Samoa Lifts Ban on High-fat Turkey Tails,' 20 May 2013 <[www.abc.net.au/news/2013-05-20/an-samoa-lifts-ban-on-high-fat-turkey-tails/4699506](http://www.abc.net.au/news/2013-05-20/an-samoa-lifts-ban-on-high-fat-turkey-tails/4699506)> viewed on 4 April 2016.

90 ABC News, 'Samoa Lifts Ban on High-fat Turkey Tails,' 20 May 2013, viewed on 4 April 2016.

91 WTO, Briefing Note, Samoa's Accession to the WTO, <[www.wto.org/english/thewto\\_e/minist\\_e/min11\\_e/brief\\_samoa\\_e.htm](http://www.wto.org/english/thewto_e/minist_e/min11_e/brief_samoa_e.htm)> viewed 11 April 2016.

the import duty reduced to 100 per cent or replaced by another tax regulation or by recommendations from the national health programme.’<sup>92</sup>

- 3.70 By the end of 2016, Samoa hopes to have reduced local consumption of turkey tails through public health education.<sup>93</sup> It is clear, however, that the causes and persistence of malnutrition are exacerbated by the lack of available nutrition trained experts in Pacific Island countries. Heather Grieve, Jennifer Busch-Hallen, and Kate Mellor from the Menzies School of Health Research observed:

Compounding and perpetuating the lack of capacity in nutrition is an absence of nutrition training, with Fiji the only PIC offering specialised nutrition training at the tertiary level. For most PICs, tertiary nutrition training is therefore expensive and time-consuming often requiring travel to Fiji, Australia or New Zealand and leaving the few nutrition positions vacant for considerable lengths of time. For example, the three nutrition positions in the Solomon Islands were all vacant for approximately 18 months when the three qualified nutritionists undertook further nutrition training abroad. Anecdotal evidence also suggests that workforce attrition rates of internationally-trained national nutritionists are high.<sup>94</sup>

## Educating for nutrition

- 3.71 For developing countries, the evidence seems to suggest, the influx of western foods is coming at a heavy cost to nutritional. Dr Nyo Htwe, a post-doctoral fellow from Myanmar on Scholarship with the John Dillon Fellowship, ACIAR, noted:

...now the country is opening up, a lot of companies are coming in. Even for KFC, it was opened recently – Kentucky Fried Chicken. It just opened last year, and it is a special food for us, not an instant food for us. Once people get money, they will go more for unhealthy food rather than healthy food.<sup>95</sup>

- 3.72 The connection between mass marketing of western processed foods adverse but pervasive influence on developing countries was highlighted

92 WTO, Briefing Note, Samoa’s Accession to the WTO, viewed 11 April 2016.

93 Eliza Barclay, Radio Program, NPR, The Salt, ‘Samoans Await the Return of the Tasty Turkey Tail’, 9 May 2013 <[www.npr.org/sections/thesalt/2013/05/14/182568333/samoans-await-the-return-of-the-tasty-turkey-tail](http://www.npr.org/sections/thesalt/2013/05/14/182568333/samoans-await-the-return-of-the-tasty-turkey-tail)> viewed 4 April 2016.

94 H Grieve, J Busch-Halen, K Mellor, ‘Undernutrition in Pacific Island Countries: An Issue requiring Further Attention’, Women’s and Children’s Health Knowledge Hub, *Compass*, May 2013, viewed 12 April 2016.

95 Dr Htwe, IRRI, *Proof Committee Hansard*, Canberra, 15 March 2016, p. 10.

by other contributors to the inquiry. For example, Professor Mu Li noted that while travelling in Sabah, Malaysia, she saw ‘a huge billboard advertisement with a happy family – three generations – sitting around sharing KFC. Increasingly, you see this, sadly, in developing countries... Advertising is definitely an influencing factor.’<sup>96</sup>

- 3.73 Dr Martin Golman, Acting Director with Papua New Guinea Forest Research, observed that another factor is price; good food is often too expensive for people:

Good food is sometimes highly priced. The food that is taken to the main market and then, if people who are able to then get a little money to buy from the market and resell it, that increases the price. So it does have an impact on people who are really at the bottom level. In that kind of situation people have no other option but to pay for the cheap meat they can afford. That is mainly the lamb flaps and the sausages and –<sup>97</sup>

- 3.74 In addition, he noted:

...And of course Coca-Cola, which is now selling only for two kina, which is very good and very cheap. Sorry, not very good to have, but very cheap. The development pressures that we have in the country – I do not know about the others, but in PNG especially it does have that kind of impact on the livelihoods of the people.<sup>98</sup>

- 3.75 In these circumstances, Professor Rina Oktaviani, the Director of International Trade Analysis and Policy Studies, Bogor Agricultural University in Indonesia, highlighted the importance of the government promoting more healthy dietary choices:

I think it is important for the government to defend healthy food and make it the focus of the people.<sup>99</sup>

- 3.76 DFAT’s Mr Marcus Howard, Acting Assistant Secretary, Health and Water Branch, Development Policy Division, advised that a focus on nutrition education is part of the Government’s health response in the region:

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96 Professor Mu Li, International Public Health, University of Sydney, *Proof Hansard*, 11 March 2016, p. 26.

97 Dr Martin Golman, Acting Director, Papua New Guinea Forest Research Institute *Proof Committee Hansard*, Canberra, 15 March 2016, p. 9.

98 Dr Golman, Papua New Guinea Forest Research Institute, *Proof Committee Hansard*, Canberra, 15 March 2016, p. 9.

99 Professor Rina Oktaviani, Director, International Trade Analysis and Policy Studies, Bogor Agricultural University, *Proof Hansard*, Canberra 4 February 2016, p. 2.

Part of our health development strategy stresses that nutrition, water and sanitation, which are linked, are clearly factors in the causes of undernutrition. Equally, we are recognising that in many developed countries, that is Indonesia and the Pacific, we also have to address education of parents and children and issues of breastfeeding. Another thing is staying with some of those practices. It is a long-term behaviour change to be able to make good choices which essentially we see as a health issue.<sup>100</sup>

- 3.77 DFAT's Dr Julie Delforce, Office of Trade Negotiations, spoke of success in Timor-Leste under the Australian supported annual President's Nutrition Prize, which had promoted an awareness of child nutrition needs to mothers. Dr Delforce reflected on the influence of the award on the previous year's winner, who was now running a women's group:

[S]he used to have very little understanding of nutrition – in common with a lot of other mothers in the community she had understood that the correct food for infants is basically something that will fill up their tummies. It might be cassava or rice or something along those lines – white food is considered to be appropriate for infants. But during the course of this prize and the education that went with it, she and her group have come to growing a much wider range of vegetables, and she and her group are even talking about maybe setting up a mini-restaurant in her area so that other people can come and sample the interesting foods that they are growing.<sup>101</sup>

- 3.78 Robert Oliver's submission reported on related approaches he is deploying across the Pacific region to raise awareness and appreciation of traditional foods with benefits to health, incomes and cultural pride.<sup>102</sup>
- 3.79 By promoting traditional cuisine to create linkages between tourism and agricultural production, Mr Oliver sees an opportunity for Pacific nations to both improve their diets and their incomes.<sup>103</sup> His submission referred to his award winning cookbooks on South Pacific cuisine,<sup>104</sup> which have

100 Mr Marcus Howard, Acting Assistant Secretary, Health and Water Branch, Development Policy Division., DFAT, *Proof Committee Hansard*, Canberra, 22 February, 2016, p. 8.

101 Dr Julie Delforce, Senior Sector Specialist, Agricultural Development and Food Security, Agricultural Productivity and Food Security Section, Agriculture and Food Branch, Office of Trade Negotiations, DFAT, *Proof Committee Hansard*, Canberra, 22 February, 2016, pp. 7-8.

102 Robert Oliver Enterprises, *Submission 47*, p. 2.

103 Robert Oliver Enterprises, *Submission 47*, pp. 1-2.

104 Robert Oliver won the Gourmand World Cookbook 'Best Cookbook in the World 2010' for his book *Me'a Kai: The Food and Flavours of the South Pacific*, and a second focused on Samoa won another Gourmand World Cookbook Award for the Best TV Chef Cookbook in 2013. See Robert Oliver Enterprises, *Submission 47*, p. 12.

captured the attention of the international food and tourism markets. Meanwhile, his television series 'REAL PASIFIK', his submission reported, has 'travelled across the Pacific creating local food chef ambassadors [and] has had terrific traction in the region, with many networks screening the whole series up 30 times'.<sup>105</sup>

3.80 In evidence to the Sub-Committee, DFAT advised that it is:

...exploring work with Robert Oliver, who is a well-known chef from New Zealand. He has worked extensively through the Pacific. He has a beautiful cookbook called *Me'a Kai: the Food and Flavours of the South Pacific*. We are looking at partnering with him to help increase awareness about beautiful traditional Pacific foods and to bring some status back to them so that people want to cook and enjoy cooking those types of foods.<sup>106</sup>

## Committee comment

3.81 In her evidence, Dr Delforce from DFAT rightly stated that:

...nutrition really is a multi-sectoral issue. Agriculture is one part of the picture and health interventions are clearly another part. And education is another part – certainly, in a case such as East Timor, part of the issue is people's understanding of nutrition...<sup>107</sup>

3.82 The Committee acknowledges that the causes and consequences of the double burden of malnutrition are extremely complex and vary significantly between countries and communities. Malnutrition in our region and particularly in the Pacific requires a deeper investigation than has been able to be conducted for this first report.

3.83 Although there is a need for further research, the overall picture is very clear. As Professor Boyd Swinburn of Deakin University has suggested: '[o]besity in East Asia is like a train crash waiting to happen.'<sup>108</sup>

3.84 It can be argued that in the South Pacific, that train crash has already taken place. As Professor Haddad and other expert observers have noted:

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105 Robert Oliver Enterprises, *Submission 47*, p. 17.

106 Ms Chakriya Bowman, Director Pacific Economic Growth Section, Pacific Regional Branch, Pacific Division, DFAT, *Proof Committee Hansard*, 22 February, 2016, p. 3.

107 Dr Delforce, DFAT, *Proof Committee Hansard* Canberra, 22 February 2016, p. 7.

108 Professor Boyd Swinburn, quoted in 'The Double Burden of Malnutrition in East Asia and the Pacific' World Bank, 17 August, 2010, <[www.worldbank.org/en/news/feature/2010/08/17/double-burden-malnutrition-east-asia-pacific](http://www.worldbank.org/en/news/feature/2010/08/17/double-burden-malnutrition-east-asia-pacific)> viewed 12 May 2016.

We have known about the problem of the double burden of malnutrition in this region for some time. But...the situation is getting more serious because the increases in overweight rates over the past 30 years have been most rapid in this region of the world.<sup>109</sup>

- 3.85 Most Pacific countries have relatively young populations, the median in Samoa, Tonga and Vanuatu is 21 years of age.<sup>110</sup> But as these populations age, the impact of non-communicable diseases may be expected to increase.<sup>111</sup> These adverse health trends will impose increased financial strain on governments, communities and households.<sup>112</sup>
- 3.86 In this context, as suggested in evidence, investment in ‘nutrition sensitive interventions’ would be one of the most cost effective forms of foreign aid and an essential foundation for long-term, sustainable development. This was strongly emphasised to the Sub-Committee by DFAT which observed that:
- As a value-for-money investment, nutrition is assessed, globally, to return \$16 for every dollar invested. In the Indo-Pacific, the ratios are even higher: 44:1 in the Philippines, 29:1 in Pakistan, and 48:1 in Indonesia.<sup>113</sup>
- 3.87 It is also clear that urgent action is required to slow the pace of the obesity epidemic that is already afflicting Pacific Island countries. It is the Sub-committee’s view that the window of opportunity for effective action is closing, and if this opportunity is missed, the double burden could be a burden to great too bear for Pacific communities and perhaps also for aid donors such as Australia.
- 3.88 The consumption of cheap, high calorie imported foods is a major contributor to the obesity problem in the Pacific region. Long term action through multi sectoral partnerships – in agriculture, education, and

109 L Haddad, L Cameron and I Barnett, ‘The Double Burden of Malnutrition in SE Asia and the Pacific: Priorities, Policies and Politics’, *Health Policy and Planning*, <[www.heapol.oxfordjournals.org/content/early/2014/10/15/heapol.czu110.full](http://www.heapol.oxfordjournals.org/content/early/2014/10/15/heapol.czu110.full)> 15 October 2014, p. 1.

110 I Anderson, *The Economic Cost of Non-Communicable Disease in the Pacific Islands: A Rapid Stocktake of the Situation in Samoa, Tonga and Vanuatu*, HNP Discussion Paper, September 2013, viewed 2 April 2016.

111 I Anderson, *The Economic Consequences of Non-Communicable Diseases in the Pacific Islands, A Rapid Stocktake of the Situation in Samoa, Tonga and Vanuatu, Final Report*, November 2012, pp. vi-viii, viewed 2 April 2016.

112 I Anderson, *The Economic Cost of Non-Communicable Disease in the Pacific Islands: A Rapid Stocktake of the Situation in Samoa, Tonga and Vanuatu, Final Report*, November 2012, p.vi, viewed 2 April 2016.

113 DFAT, *Submission 12*, p. 33.

health – will be needed to address the impacts of over and undernutrition. Pacific Island peoples must have the option of a tasty, affordable and healthy diet and an appreciation of nutritious locally produced foods. The innovative efforts of Robert Oliver and his team in advocating for traditional Pacific cuisine, regionally and internationally, should be promoted.

- 3.89 As discussed in the following chapter, nutrition sensitive approaches to agricultural development, that is ‘agricultural development with explicit nutrition objectives’,<sup>114</sup> will be vital to increase the supply and affordability of these foods.
- 3.90 Women can and do play an important role in supporting good nutrition, both as producers of food and in its preparation for their families. Good nutrition in early in life, in particular in the first 1 000 days, is regarded as the foundation of good health. The importance of this to Australia’s future aid development policy for the region will be discussed in Chapter five.

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114 DFAT, *Submission 12*, p. 36.



## Agriculture, nutrition and women

- 4.1 The Sub-Committee's previous inquiry into the role of the private sector in promoting economic growth and reducing poverty in the Indo-Pacific region highlighted the part played by multi-sectoral partnerships, including the private sector, to deliver these development goals. The current inquiry called for an exploration of the role of partnerships in the agriculture and fisheries sector to address similar goals.
- 4.2 Given the terms of reference for this inquiry are intended to focus on a wider range of issues, including food security, gender equality and women's empowerment, much of the evidence received by the Sub-Committee has highlighted the strong linkages between agriculture, women and nutrition.
- 4.3 As the discussion in the preceding chapter indicates, the causes of malnutrition in the immediate region are, as the Department of Foreign Affairs and Trade (DFAT) submission points out, 'multi-faceted and not just related to insufficient or excessive intake of food'.<sup>1</sup>
- 4.4 Much of the evidence presented to the Sub-Committee highlighted the need for a multi-sectoral approach to address the complex underlying causes of malnutrition. At the same time, as outlined in Chapter two, while agriculture's role in achieving food security has long been recognised, its importance to achieve nutrition goals has only recently been addressed in international development fora. Most notably, Sustainable Development Goal 2 explicitly aims to: 'End hunger, achieve food security and improved nutrition, and promote sustainable agriculture'.<sup>2</sup>

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1 Department of Foreign Affairs and Trade (DFAT), *Submission 12*, p. 34.

2 DFAT, *Submission 12*, p. 35.

- 4.5 Self-evidently, agriculture development can provide a ready source of food and income for poor populations and contribute to broader economic growth. Importantly, too, agriculture development is a major means of empowering women, especially given that women make up at least half of the world's farmers in many countries in the region.
- 4.6 Initiatives that both educate women and enhance their involvement in agriculture-based activities can strengthen women's capacity, increase their access to, and control over, resources and assets, consequently augmenting their power to make decisions on the purchase and allocation of food, health and care within their households.
- 4.7 The purpose of this chapter is to survey some of the programs discussed in evidence to identify how both agriculture and gender interventions, by themselves and in combination, contribute significantly to improved nutrition outcomes. The discussion proceeds in three main sections:
- the first, covers evidence on the role of research and agricultural development partnerships, and how they can support food and nutrition security in the region;
  - the second, discusses the interrelationship between gender empowerment and nutrition through agricultural development; and
  - the third, considers sustainable agriculture and aquaculture, with a specific focus on challenges in the Pacific region.

## **Partnerships for food and nutrition security**

- 4.8 With global food demand expected to increase 60 per cent by 2050,<sup>3</sup> the need to increase the supply of affordable, nutrient rich, healthy safe and fresh food has never been more urgent. Associate Professor Robyn Alders AO, Principal Research Fellow at the Faculty of Veterinary Science, Sydney University, stated:

One of the greatest challenges of our time concerns sustainable agriculture and food and nutrition security. Indeed, a key question that we grapple with and which unifies our work across these fields is how we provide sufficient, nutritious and affordable food for a growing population in an ethical and sustainable manner'.<sup>4</sup>

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3 DFAT, *Submission 12*, p. iii.

4 Associate Professor Robyn Alders, Principal Research Fellow, University of Sydney University, *Proof Committee Hansard*, Sydney 11 March 2016, p. 25.

- 4.9 Much evidence to the inquiry focussed on the role and potential of agricultural development partnerships to meet this challenge in the Indo-Pacific region.<sup>5</sup>
- 4.10 The Sub-Committee was advised that organisations such as the Australian Centre for International Agricultural Research Centre (ACIAR) and the Commonwealth Scientific and Industrial Research Organisation (CSIRO) play an important role with DFAT in co-ordinating research and technical innovation to establish and support these partnerships.
- 4.11 ACIAR's submission provided many case studies of projects it has brokered in development of new and improved strains of grains, which are vital as food staples and stock feeds across the region;<sup>6</sup> pest and virus free vegetables;<sup>7</sup> and integrated village management systems for dairy farming and poultry production.<sup>8</sup> Partner organisations also referred to success in these and other areas in their submissions.<sup>9</sup>
- 4.12 The Commonwealth Scientific and Industrial Research Organisation (CSIRO) advised of key contributions in the areas of nutrition sensitive interventions aiding women under the Food Systems Innovation (FSI) initiative,<sup>10</sup> a partnership between CSIRO, ACIAR and DFAT, to improve program designs and interventions, specifically:

5 See a list of Australian Government Partners is in *Appendix E*.

6 For example, Box 5: 'Improved Sorghum For Water-Limited Environments': 'A 5-year project that began in 2014 is boosting the capacity and productivity of the Ethiopian sorghum breeding program, providing germplasm, tools and skills to underpin genetic gain for productivity in water-limited environments' – led by the University of Queensland and supported by the Bill and Melinda Gates Foundation (BMGF, 85 per cent) and ACIAR (15 per cent, or \$600 000)', ACIAR, *Submission 34*, p. 12.

7 Box 7: 'Virus-free Sweet Potato in Papua New Guinea': 'using heat treatment of tissue culture sweet potato plants to eliminate the viruses and generate pathogen-tested (PT) cuttings for replanting' – Australian and international partners, including Queensland's Department of Agriculture and Fisheries and the Australian Sweet Potato Growers Association (ASPGA), and PNG's National Agricultural Research Institute (NARI), ACIAR, *Submission 34*, p. 14.

8 Box 6: 'Innovation in Indonesia (integrated village management system' (IVMS) to improve cow-calf systems in the province of West Nusa Tenggara (NTB) Partners in Indonesia (Mataram University and BPTP NTB) and Australia (CSIRO and University of Queensland), ACIAR, *Submission 34*, p. 13.

9 To name just a few: Nepal Agricultural Research Council (NARC), *Submission 13*; Sub-Institute of Agricultural Engineering and Postharvest Technology (SIAEP), *Submission 24*; Northern Mountainous Agriculture and Forestry Science Institute (NOMAFSI), *Submission 25*; Landcare Foundation Philippines, *Submission 40*; Hue University of Agriculture and Forestry, *Submission 44*.

10 DFAT notes that the 'FSI has focused on linking development programs with research and evidence on the role of agriculture in addressing malnutrition, and the role of the private sector in agriculture and poverty reduction', *Submission 12*, p. 10.

- Co-designing TOMAK – To’os Ba Moris Diak – Farming for Prosperity, Timor-Leste’s new agricultural livelihoods program with combined goals of partnering in sustainable and profitable value chains with the promotion of year-round healthy diets.
- Development of Operational Guidance Notes on Nutrition-Sensitive Agriculture and Women’s Economic Empowerment – which will ‘support program managers to integrate gender and nutrition considerations in agricultural interventions’.<sup>11</sup>

4.13 DFAT’s Dr Julie Delforce, Senior Sector Specialist, Agricultural Development and Food Security, spoke on the significance of the new TOMAK program (funded for \$25 million over 2016–2021) as the Department’s flagship for nutrition sensitive agriculture:

[TOMAK] is an innovative program which is trying to bring together both the nutrition and women’s economic empowerment elements of an agricultural program as well as production for market opportunities. One component is about helping farmers to access different new markets which they have not accessed to date. But also incorporated into that is the question, ‘What are the nutrition implications of those new production opportunities?’ A separate component under the one umbrella specifically addresses nutrition issues.<sup>12</sup>

4.14 ACIAR’s Chief Executive Officer Dr Nick Austin referred to successful work under the Timor-Leste Seeds of Life program which supported development of the TOMAK.<sup>13</sup> He considered that the Seeds of Life initiative, which will end in June 2016,<sup>14</sup> had demonstrated how long term research can support innovation, such as by identifying suitable genetic material for scaling up,<sup>15</sup> with measurable benchmarks to drive community level outcomes to specified goals.<sup>16</sup>

11 CSIRO, *Submission 18*, p. 9.

12 Dr Julie Delforce, Senior Sector Specialist, Agricultural Development and Food Security, Agricultural Productivity and Food Security Section, Agriculture and Food Branch, Office of Trade Negotiations, DFAT, *Proof Committee Hansard*, Canberra, 22 February 2016, p. 3.

13 Dr Nick Austin, Chief Executive Officer, ACIAR, *Proof Committee Hansard*, Canberra, 22 February, 2016, p. 11.

14 The Seeds of Life Program began in 2000 and was progressed in three five year phases. See Timor-Leste Ministry of Agriculture and Fisheries (MAF) Seeds of Life – Fini -Ba Moris, ‘MAF-SoL Turnover Ceremony’ 28 January 2016 < [seedsoflifetimor.org/maf-sol-turnover-ceremony/](http://seedsoflifetimor.org/maf-sol-turnover-ceremony/) > viewed 18 April 2016.

15 Dr Austin, ACIAR, *Proof Committee Hansard*, Canberra, 22 February, 2016, p. 13.

16 Dr Peter Horne, General Manager, Country Programs, ACIAR, *Proof Committee Hansard*, Canberra, 22 February, 2016, p. 11.

## The potential of nutrient fortified foods

4.15 As discussed in Chapter three, micronutrient deficiencies are particularly concerning among women and children, with projected impacts for long term population health. Professor Raghendra Jha referred to his research based in India:

When we talk about food sufficiency and nutritional outcomes...we have to think in terms of technological progress of research that helps augment food sufficiency, removes food insecurity and improves nutritional outcomes across a broad spectrum of nutritional indicators – not just calorie but, very importantly, things like micronutrients, which are very essential for the develop[ment] of women and children in particular.<sup>17</sup>

4.16 There was discussion in the evidence of the relative benefits of bio-fortified crops to increase production and nutrient content, for instance:

- World Vision Australia referred to its work with more than five bio-fortified crops in 15 developing countries, including bio-fortified beans – which are 70 per cent higher in iron and 40 per cent higher in zinc compared to normal beans.<sup>18</sup>
- CropLife Australia reported on its Golden rice product, which has elevated levels of vitamin A, and advocated for the use of genetic modification to address food and nutrition shortages, noting: ‘The nutritional quality of staple foods can be substantially improved using transgenic methods compared to what can be accomplished using traditional breeding’.<sup>19</sup>

4.17 The Sub-Committee also heard that nutritious indigenous plants are being researched and improved for larger scale production, including for food supplementation of less healthy mass-produced food products.

4.18 Biosciences Eastern and Central Africa-International Livestock Research Institute (BeCA-ILRI) Hub, for example, referred to research, development and processing of traditional nutrition rich Amaranth plant<sup>20</sup> products:

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17 Professor Raghendra Jha, Professor of Economics, Australian National University, Private capacity, *Proof Committee Hansard*, Canberra, 4 February 2016, p. 5.

18 World Vision Australia, *Submission 22*, p. 4.

19 CropLife Australia, *Submission 37*, p. 9.

20 Amaranth is eaten as leaf vegetable and cereal. It is gluten free with high levels of protein, iron, magnesium and dietary fibre, with bioactive peptides thought to be cancer-preventive.

The Amaranth Project identified and addressed gaps in knowledge and technologies across the amaranth value chain in Kenya and Tanzania, such as the need for more appropriate varieties. It tested, selected and distributed six optimal varieties along with advice on better cultivation techniques and the nutritional value of the crop. The project also worked with the private sector to develop better food processing and new amaranth-based products and to assess the feasibility of consumer uptake.<sup>21</sup>

- 4.19 Dr Martin Golman, a researcher in forestry at Papua New Guinea Forest Research Institute, however, advised that the sale price of improved products can be an inhibitor to commercialisation, citing efforts to promote an ACIAR improved ngali nut product:

.... It needs to be brought out to the farmers and to the rural communities to then take it on and see that the product that they have improved on gets to the market at a reasonable rate so that people can afford to pay for those kinds of foods that are improved in research. I think that is the dilemma we are facing in terms of not getting that far ahead in PNG. I think that is something I am also looking at in terms of forestry to also expand on.<sup>22</sup>

## Diet diversification and 'scaling up'

- 4.20 Many of the projects listed in the first section of this chapter are livestock and diet diversification projects designed to improve nutrition at the local level. Others have potential for scaling up, with implications for the sustainability of local fresh and nutritious food production, as well raising issues about the capabilities to store and supply fresh safe foods.
- 4.21 Poultry is an important source of animal protein and income in rural communities across the region.<sup>23</sup> Sydney University referred to its work under ACIAR funded poultry programs in Timor-Leste:<sup>24</sup>

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See Grains and Legumes Nutrition Council <[www.glnc.org.au/grains/types-of-grains/amaranth/](http://www.glnc.org.au/grains/types-of-grains/amaranth/)> viewed 18 April 2016; DFAT, *Submission 12*, p. 44.

21 Biosciences Eastern and Central Africa-International Livestock Research Institute (the BecA-ILRI Hub), *Submission 11*, p. 1.

22 Dr Martin Golman, Acting Director, Papua New Guinea Forest Research Institute, *Proof Committee Hansard*, Canberra, 15 March 2016, p. 9.

23 DFAT, *Submission 12*, p. 37.

24 Including under the multi-agency Timor-Leste Village Poultry Health and Biosecurity partnership with DFAT, Timor-Leste MAF and Australia's Department of Agriculture and

Since November 2014 alone, our multidisciplinary, multiagency, gender and nutrition-sensitive approach to improving the health of village poultry in Timor-Leste has increased the number of households raising poultry by 13 per cent in communities vaccinating against Newcastle Disease (ND). The emphasis is now on increasing the consumption of animal source food by mothers and children, and on the decision-making power of women.<sup>25</sup>

- 4.22 ACIAR reported on the efficacy of this multi-sectoral approach, referring to a program in Africa to delineate the features of the One Health model, which combines a focus on animal and human health,<sup>26</sup> as shown in **Case study 4.1**, overleaf.
- 4.23 The Committee also heard of other diet diversification programs using pigs, aquaculture and cavy (guinea pigs) for protein and income supplementation in Africa, which also had the benefit of dramatically increasing income.
- 4.24 The Hon. Dr Luc Mulimbalimba-Masururu advised of alternative crop planting in the Democratic Republic of the Congo which had diversified food sources to include aquaculture and pigs, dramatically increasing both protein intake and income. More nutritious crops such as beans, Chinese cabbages and sweet potato were also being grown to supplement less nutrient rich traditional foods such as Ugali, made of corn and cassava flour.<sup>27</sup>
- 4.25 The BecA-ILRI Hub described the results of its 'alternative livestock for smallholder farmer resilience' programs which had created domestic opportunities to breed cavy for 'improved family nutrition and income generation targeting the most vulnerable section of the population: women and children', and were then scaled up across Africa:

... [it is] now estimated that 12 000 individuals are benefiting from the project directly at the household level across the two countries. Intensification of cavy culture is anticipated to improve the livelihoods of more than 200 000 households in North and South Kivu provinces of DRC with the pilot sites set up in collaboration

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Water, DAWR, in DFAT, *Submission 12*, p. 37.

25 Sydney University, *Submission 46*, p. 7.

26 Ms Jo Evans, Deputy Secretary, *Proof Committee Hansard*, Canberra, 29 February 2016, p. 3; and see *Exhibit 15: R Alders, A Agnololo, B Bagnol, 'Using a One Health Approach to Promote Food and Nutrition Security in Tanzania and Zambia', GRF Davos Planet@Risk, Vol. 2, No. 3, Special Issue on One Health (Part I/II)*, April, 2014.

27 The Hon. Dr Luc Mulimbalimba-Masururu, Mission in Health Care and Development, *Proof Committee Hansard*, Canberra 3 March 2016, pp. 1-3.

with local partners serving as a prime source of training and information on a range of cavy production.<sup>28</sup>

#### Case study 4.1 One Health partnership model—poultry in Tanzania and Zambia

##### **Strengthening food and nutrition security in Tanzania and Zambia**

This ACIAR project purposes to improve maternal and child health and nutrition by improving family poultry and crop production, working with women smallholder farmers.

The five-year project will work to increase the quantity, quality, accessibility and utilisation of nutrient-rich foods (e.g. traditional vegetables, eggs) that are available to households; to demonstrate the benefits of a multidisciplinary approach; and to provide cost-benefit analysis that will underpin decision-making at the policy level in Zambia and Tanzania (and possibly beyond) to support agricultural interventions as a means to improve food security and prevent undernutrition. Women are a primary focus for the project, because of their critical role in both farming and family nutrition.

The project team includes members of the local district and national government ministries of agriculture and health, research institutions and universities all working together. Researchers in the team come from a wide range of disciplines and include nurses, doctors, nutritionists, veterinary virologists, veterinary epidemiologists, economists, ecologists, agronomists, sociologists and an anthropologist. The project has already seen the benefits of this interdisciplinary 'one health' approach—all understand each others' skills and roles understand the project's objectives, and share a common goal.

*Source* ACIAR, *Box 10: Submission 107, p. 20.*

- 4.26 There were also opportunities to diversify local food production under larger scale agriculture developments. Cocoa production was a notable example.<sup>29</sup> Sydney University's Professor of Plant Pathology David Guest emphasised the utility of the approach to build sustainable food supplies and stable local economies in fragile Bougainville, Papua New Guinea (PNG):

We have just started a new project in Bougainville. Bougainville is a very special case because of the civil war and the impending plebiscite for whether they want to become independent. They

28 BecA-ILRI Hub, *Submission 11, p. 5.*

29 ACIAR, *Submission 34, p. 20.*

really need to get a tax base so that they can become sustainable. The obvious way to do that is through cocoa farming. We want to train people in the villages to think about how you do not just have to grow cocoa. You can diversify. You can be really good cocoa farmers on a small area of land and on the other parts of your land think about other crops: food crops, vegetables, livestock and things like that.<sup>30</sup>

- 4.27 Assoc. Professor Alders referred to the importance of ‘strong collaborations with local government, NGOs and industry stakeholders, including Mars Corporation and other cocoa buyers’ to the successful outcomes for cocoa farmers in Indonesia and PNG:

The benefits of this work have been considerable. Smallholder cocoa farmers have benefited from higher production and income diversification by intensifying cocoa production and freeing surplus land for other food, livestock and cash crops, developing new enterprises that are often more women friendly and resulting in more diversified and resilient farm incomes.<sup>31</sup>

- 4.28 ACIAR’s submission identified potential to achieve similar benefits by scaling up production in cocoa in the Solomon Islands and Vanuatu:

Cocoa is also the third-most-important agricultural export from Solomon Islands and a major export from Vanuatu – in both countries supporting 20–25 per cent of all households. The cocoa industry in Samoa and Fiji is much smaller but scoping studies by ACIAR suggest that both have growth potential, especially to supply low-volume, high-value markets.<sup>32</sup>

## Safe food storage and supply

- 4.29 Once sufficient produce is ready for marketing, post-harvest considerations, such as food storage and transport, can affect the affordability, quality and freshness of the produce.
- 4.30 The Copenhagen Consensus Center discussed the implications of food wastage in the developing world,<sup>33</sup> citing research which found lack of infrastructure to be the main cause of food wastage:

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30 Professor David Guest, Professor of Plant Pathology, University of Sydney, *Proof Committee Hansard*, Sydney, 11 March 2016, p. 28.

31 Assoc. Professor Alders, Sydney University, *Proof Committee Hansard*, 11 March 2016, p. 25.

32 ACIAR, *Submission 34*, p. 20.

33 Copenhagen Consensus Center, *Submission 4*, p. 1.

Simply put, if there are no proper roads, farmers cannot easily sell their surplus produce, which may then spoil before it can be eaten. The researchers found that four key factors could make a real difference to losses in the food chain: an electricity supply, paved roads, rail capacity and road capacity. These mean that farm produce can be sent to market and other food supplies brought in, and that grains can be dried or vegetables kept cool. The ongoing impact of reduced food loss and better infrastructure would be in reduced food costs for the poor, and corresponding decreases in hunger and malnutrition.<sup>34</sup>

- 4.31 DFAT's Ms Chakriya Bowman, Director, Pacific Economic Growth Section, commented further on storage issues in relation to food choices:

Part of it is also a story about urbanisation and storage. It is very hard to store taro when you are in a city area. You actually need quite a large amount of storage space to properly store taro. And transporting taro into those urban areas damages a lot of it. It is hard to do, particularly with the poor state of roads and so on. So, in the urban areas, we see a switch out of those types of products because of the storage issues and because of the easy availability of the other products.<sup>35</sup>

- 4.32 Dr Nyo Htwe, a rice and rodent ecologist with the International Rice Research Institute (IRRI) in Myanmar, referred to the use of pesticides to control rats during storage and transport, which affected food safety. She drew attention to the advantages of collaborative research through IRRI and ACIAR, which had enabled plant and rodent scientists to develop a rodent management system to address this problem, potentially 'throughout Asia, not only in Myanmar – in Indonesia, Vietnam and other places'.<sup>36</sup>
- 4.33 Dr Nurul Hilmiati, Researcher, Indonesian Agency for Agricultural Research and Development, reported on another innovative approach to address urban food supply problems – 'smart gardening' – using verticulture. By growing plants vertically, urban gardens can improve supply of fresh affordable vegetables such as tomatoes and chillies:

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34 Copenhagen Consensus Center, *Submission 4*, Attachment 1: 'Food Security Build Roads in the Developing World to Bolster Food Supplies', International Food Policy Research Institute, p. 50.

35 Ms Chakriya Bowman, Director, Pacific Economic Growth Section, Pacific Regional Branch, Pacific Division, DFAT, *Proof Committee Hansard*, 22 February, 2016, p. 2.

36 Dr Nyo Me Htwe, Postdoctoral Fellow, International Rice Research Institute (IRRI), *Proof Committee Hansard*, Canberra 15 March 2016, pp. 2-3.

The market pressure is very high in Indonesia as well. Even like the small supermarkets...but what the government is now doing is trying to encourage people to use whatever land they have, even in the urban population. They are encouraging people to do gardening in whatever space they have.<sup>37</sup>

## Gender and nutrition

4.34 The Sub-Committee's previous report on the role of the private sector in reducing poverty and the Human Rights report *Empowering Women and Girls* both discussed women's contribution as agricultural workers in the Indo-Pacific region, and the many factors in their disempowerment, including poor financial literacy and access to finance, limited land access or ownership, and the impacts of outmigration leading to the 'feminisation of agriculture'.<sup>38</sup>

4.35 Since these reports were presented, the 2016 *Gender Equality and Women's Empowerments Strategy* has enshrined women's empowerment as a plank in Australia's agricultural development policy, noting:

Women comprise nearly half of the world's agricultural workers but have less access than men to productive resources and opportunities. Improving women's access could increase women's agricultural yields by 25 to 30 per cent and increase agricultural output in developing countries between 2.5 and four per cent.<sup>39</sup>

4.36 DFAT's submission highlighted its intention to research the interrelationship between women's empowerment and better nutrition, in recognition of women's growing importance as primary producers in the developing world.<sup>40</sup> The CSIRO also referred to prior research work with DFAT which confirmed this need, noting:

Encouraging a shift to more nutritionally sensitive agriculture and food systems will both progress women's empowerment and gender equity as well as progressing nutritional quality and

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37 Dr Nurul Hilmiati, Researcher, Indonesian Agency for Agricultural Research and Development, *Proof Committee Hansard*, Canberra, 15 March 2016, p. 9.

38 See in particular Chapter 8, 'The Economic Empowerment of Women', *Empowering Women and Girls*, December 2015.

39 Food and Agriculture Organisation (FAO), *The State of Food and Agriculture, Women in Agriculture: Closing the Gap on Development*, 2010-11, p. 42, cited in *Gender Equity and Women's Empowerment Strategy*, February 2016, p. 9.

40 DFAT, *Submission 12*, p. 41.

security...initiatives that enhance women's involvement in agriculture-based activities can strengthen women's capacity, increase their access to, and control over resources and assets, and consequently augment their power to make decisions on the purchase and allocation of food, health and care within their households, as well as decisions on how to engage in value chains to increase production and value adding processes to generate additional incomes.<sup>41</sup>

- 4.37 The Crawford Fund nevertheless advised that the implications for improving nutrition go well beyond the dimensions of agriculture production to matters of health, training and transformation of social attitudes to women and girls:

In spite of being central to food production, women (who make up 43 percent of farm labour and head many rural households) are not valued in some societies, underrepresented in power structures, more vulnerable to change, poorly educated and unable to control fertility rates. Agricultural research, training of women and girls in improved nutrition (from higher quality foodstuffs) and reproductive health provide part of the solution to these poor outcomes. But men too must be encouraged to recognise the vital contribution that women make. Greater inclusion of women in agricultural decision making and in steps of the supply chain will have significant nutritional, health and associated benefits in many developing countries.<sup>42</sup>

## Empowering rural women for better nutrition

- 4.38 As noted above, the factors affecting women's empowerment as food producers are complex, going beyond the scope of the following discussion; the focus instead is on empowering women who are now in charge of agricultural production in many regional communities.
- 4.39 The implications of the phenomenon known as the 'feminisation of agriculture' were examined in some detail in previous Joint Standing Committee reports. The Human Rights Sub-Committee report *Empowering Women and Girls*, in particular, considered the wider socio-economic impacts of labour flows of both men and women from rural areas with the object of escaping poverty or improving their family's quality of life.<sup>43</sup>

41 CSIRO, *Submission 18*, p. 9.

42 The Crawford Fund, *Submission 49*, pp. 2-3.

43 See particularly discussion, *Empowering Women and Girls*, December 2015, pp. 271-75.

- 4.40 In her submission to this inquiry, Dr Kuntala Lahiri-Dutt discussed the significance of these trends in terms of nutrition intake across the region. In particular, she noted that the influx of remittance income was a double edged sword for rural women: without knowledge of nutrition outside traditional staples and less knowledge of farm management, these women were doubly burdened and disempowered both as carers and farm managers.<sup>44</sup>
- 4.41 Given the challenges imposed, ACIAR emphasised that designing 'gender-sensitive' agriculture projects is particularly important for food security. As a best practice model, the submission referred to the Sustainable and Resilient Farming Systems Intensification' (SRFSI) program in the Eastern Gangetic Plains (EGP) of Bangladesh, India and Nepal, at **Case Study 4.2**, overleaf, which has experienced an exodus of men so that 50 per cent of farms are now under female management.<sup>45</sup>
- 4.42 The CSIRO advised of its contribution in partnership with ACIAR and DFAT to respond to the cultural determinants affecting nutrition for women and children. Dr Daniel Walker, Research Director, Agriculture, referred to work done in the context of the FSI program in the Mekong region in China, where 'smallholder production...is increasingly dominated by female farmers', and noting: 'That raises a range of institutional, cultural and value chain issues in terms of how you most effectively support that emerging smallholder farmer group'.<sup>46</sup>
- 4.43 Dr Andrew Hall, Research Group Leader, Agriculture, added that DFAT and the CSIRO are now working closely to build capacity across their program teams to better understand how 'gender dimensions could be incorporated into program design', aligned with global best practice.<sup>47</sup>

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44 Dr Kuntala Lahiri-Dutt, *Submission 35*, pp. 1–2, and see discussion World Vision Australia, *Submission 22*, p. 7.

45 ACIAR, Box 9: *Submission 107*, p. 15

46 Dr Daniel Walker, Research Director, Agriculture, CSIRO, *Committee Hansard*, 29 February 2016, p. 7.

47 Dr Andrew Hall, Research Group Leader, Agriculture, CSIRO, *Committee Hansard*, 29 February 2016, p. 7.

#### Case study 4.2 Gender strategy for sustainable and resilient farming in the Gangetic Plains

##### **Sustainable and Resilient Farming Systems Intensification (SRFSI) program**

The SRFSI is a large four-year project that began in 2014, with more than 20 partner groups and targeting more than 7 000 farmers in the eastern Gangetic Plains (EGP), home to 300 million people, with the world's highest concentration of rural poverty and a strong dependence on agriculture for food security and livelihood. The project aims to increase smallholder crop productivity and resilience, and to link farmers to markets and support services to enable them to innovate in the face of climate and economic change.

With more than half the farms in the Gangetic Plain region now run by women, the project focusses on empowering and benefiting women. It also aims to improve gender awareness among project team members and participants, and to ensure that the project addresses both men's and women's needs. Its goals include:

- Better understanding the role, capabilities and experience of women: The project has collected separate data for men and women in each of the 40 field sites on their activities; access to resources, information and technology; coping strategies; decision-making; barriers and challenges; and goals and priorities.
- Participation in focus groups: all focus group discussions included women, and some focus group discussions have been divided into separate female, male and mixed groups in a particular effort to gather women's views.
- Participation in activities: both men and women farmers have been included in on-farm testing, participatory evaluation and dissemination of results. The project has successfully targeted the leaders of women's self-help groups to plan and implement field site activities.
- Gender sensitisation training: participants in the training included Australian and local researchers, local agricultural extension staff, local field technicians, and local non-government organisations.

*Source* ACIAR, Box 9: Submission 107, p. 15.

- 4.44 Evidence suggested that targeting those agricultural and livestock activities which are traditionally regarded as appropriate for women not only has nutrition benefits for their families, but can also be socially transforming.<sup>48</sup> Assoc. Professor Alders elaborated on the dual benefits to nutrition and empowerment of women under village poultry programs:

We know that women who control village poultry and make decisions over how household income from their livestock is allocated tend to spend that increase on nutritious food, health care and education. Reports show that an increase in a woman's income of a mere \$10 achieves the same improvements to children's nutrition and health as an increase in a man's income of \$110. If we can empower women, we will achieve improved nutrition. We will also build economic opportunity and support educational outcomes.<sup>49</sup>

- 4.45 Dr Sifa Chiyoge, Regional Director for Africa in the International Co-operative Alliance (ICA), described how participation in female farming co-operatives involved in producing vitamin rich products from the Marula tree,<sup>50</sup> traditionally managed by women, led to leadership roles up the value chain:

In Namibia we have these particular co-operatives which are women's co-operatives. This is for the simple reason that according to the tradition it was the women who did the harvesting and the processing of marula. Some of them have been up to export ... We have the same in Lesotho and Botswana. In our showcases in Africa, we have Lesotho and Botswana with 50 per cent of their managers and their directors being women in co-operatives and these are the mixed ones. We are doing quite well in terms of women in agriculture and they have moved from being workers to becoming owners of agribusiness and the co-operatives.<sup>51</sup>

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48 Sydney University, *Submission 46*, p. 7; BecA-ILRI Hub, *Submission 11*, p. 2.; Dr Sifa Chiyoge, Regional Director Africa, ICA, *Proof Committee Hansard*, Canberra, 3 March 2016, p. 9; Sydney University, *Submission 46*, p. 7.

49 Assoc. Professor Alders, Sydney University, *Proof Committee Hansard*, Sydney 11 March 2016, p. 25.

50 The fruit of the Marula Tree [*Scelerocarya birrea*] is extremely high in vitamin C content and can be used as a base for juices, jams, jellies, ciders and alcohol drinks as well as in aromatherapy, and for homeopathic medicines and essential oils. See Marula Natural Products < [www.marula.org.za/about.htm](http://www.marula.org.za/about.htm) > viewed 30 March 2016.

51 Dr Chiyoge, ICA, *Proof Committee Hansard*, Canberra, 3 March 2016, p. 9.

4.46 The BecA-ILRI Hub highlighted successes under its Africa Biosciences Challenge Fund (ABCF) projects which focus on ‘improving nutritional quality, availability or safety...for pregnant women, nursing mothers, infants and children aged 5 and under’. The ABCF supports women’s involvement in producing Amaranth plants, referred to above, as well as mushrooms, cavies and pigs which are traditionally regarded as being under the ‘control’ – owned, grown raised or sold – by women. For example:

In the Amaranth Project, women are heavily involved in amaranth growing and selling (50 per cent) and even processing in Kenya...Women were strongly represented (87 per cent) in the participatory selection of preferred amaranth varieties for commercialisation and scale-out, based on field performance, palatability/taste evaluation and consumption of amaranth.<sup>52</sup>

4.47 Women were also being promoted at research development level under the ABCF. The submission advised: ‘involvement of women scientists is especially important given that the majority of those who produce, process, and market Africa’s food are women’.<sup>53</sup>

4.48 The Sub-Committee investigated with ACIAR the profile of women under its research and development projects. Dr Austin advised that while ACIAR did not have a gender quota system, there was a requirement for ‘building capacity’ in gender equity under its programs, and particularly for younger women researchers through provision of formal and informal training opportunities:

Within the project teams we will often go back and specify that we are looking for a more diverse capability across the project partner institutions in the developing countries – and, indeed, in Australia, as well – in those partnerships. There is a role in modelling that as well. In many ways that may be the largest lasting legacy, and the capacity that is built. We very definitely take an active engagement in ensuring that there is gender representation.<sup>54</sup>

4.49 The Ministry of Agriculture and Rural Development of Vietnam indicated this approach was effective, with its Sub-Institute of Agricultural Engineering and Post-Harvest Technology – SIAEP reporting that:

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52 BecA-ILRI Hub, *Submission 11*, p. 2.

53 BecA-ILRI Hub, *Submission 11*, p. 3.

54 Dr Nick Austin, CEO, ACIAR, *Proof Committee Hansard*, 22 February, 2016, p. 11.

...70 per cent of SIAEP researchers participating in its ACIAR project [are] women. In the area of production and business, particularly at producers, growers and enterprise (cashew, fruits, vegetables ...), the percentage of women is about 60 to 80 per cent of the workers in the units of the localities.<sup>55</sup>

## Labour saving technology

4.50 Submissions highlighted the importance of innovation in 'labour saving technologies, practices and services for women and girls' to address evolving food and nutrition challenges in the region.<sup>56</sup>

4.51 Dr Htwe of IRRI observed that the development of 'woman friendly' agricultural equipment in Burma is critical because of the outmigration trend. She advised that these technical developments have also supported women's involvement as decision-makers in farming work:

Usually men can work on the big machine. Now, there is a lightweight transplanter... So it is easier to manipulate, yes. Also, there is what we call a 'transeeder' which was developed by our colleagues in Vietnam. Women just push through and then it seeds automatically. In that way, they can finish five acres, so that means 2.5 hectares for one day. For the women, can you imagine if they have to transplant all that; it is not easy. So that is why we are thinking to get the technology which is friendly for women. Also, we try to include women in our meetings and empower them to speak up. Usually, women just sit behind and agree with the men. But in our project they have really opened up now. That is the way we are working for women in agriculture.<sup>57</sup>

4.52 Members of the ICA panel also spoke of the broader benefits to women of larger scale infrastructure development such as in improved water supply and electrification, which had been promoted by farmers' collectives.<sup>58</sup> United States ICA Board Member Mr Martin Lowery referred to the establishment of electricity networks in Bangladesh and in the Philippines under direction of President Kennedy in 1962. He advised that World Bank studies had since shown:

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55 Sub-Institute of Agricultural Engineering and Postharvest Technology (SIAEP), *Submission 24*, p. 2.

56 DFAT, *Submission 12*, p. 41; World Bank Group, *Submission 20*, p. 7; Hue University of Agriculture and Forestry, Vietnam, *Submission 44*, p. 9.

57 Dr Htwe, IRRI, *Proof Committee Hansard*, Canberra, 15 March 2016, p. 5.

58 Dr Chiyoge, ICA, *Proof Committee Hansard*, Canberra, 3 March 2016, p. 9; Mr Martin Lowery, Board Member ICA, *Proof Committee Hansard*, Canberra, 3 March 2016, pp. 9–10.

...very specific changes in infant mortality, in girls' education, in sanitation, in water quality and in the ability to improve the quality of life of women who carry so much of the burden, as we all know, in rural areas around the world.<sup>59</sup>

4.53 Ms Grace Nicholas of ActionAid Australia suggested:

When looking at innovation and technologies, we would advocate for partnerships that consult with women – for example, the kinds of technologies that support women are ones that reduce the need to travel long distances for firewood and simple things like dam liners, which prevent water seepage. With other kinds of technologies that might be introduced, it is essential to ensure that women cannot just engage with the value chain at the low-power level of producer but also participate in and gain across the value chain.<sup>60</sup>

4.54 Dr Mulimbalimba-Masururu of Mission in Health Care and Development supported this view, referring to the role of local organisations in ensuring interventions target women's needs in the Congo. He noted that the Mission, for example, had chosen to invest in many bicycles, rather than spend on motorised transport, to reduce health impacts on rural women who must carry heavy produce over long distances.<sup>61</sup>

## **Sustainable agriculture and aquaculture in the Pacific**

4.55 During the inquiry, sustainable food and nutrition security in the Pacific region emerged as a major issue of concern. The Pacific Island Forum's Office of the Chief Trade Adviser (OCTA) indicated the extent of the problems to be addressed:

- With the exception of a few FICs which are self-sufficient, the majority are net food importing countries...
- Farmers in many FICs are cut off from markets due to the lack of infrastructure. The growing occurrence of natural disasters poses a threat to agricultural production and food security in the FICs.

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59 Mr Lowery, ICA, *Proof Committee Hansard*, Canberra, 3 March 2016, p. 8.

60 Ms Grace Nicholas, Program Quality Co-ordinator, ActionAid Australia, *Proof Committee Hansard*, Sydney 11 March 2016, p. 5.

61 The Hon Dr Mulimbalimba-Masururu, Mission in Health Care and Development, *Proof Committee Hansard*, Canberra, 3 March 2016, p. 6.

- There is a growing urban population in many FICs with limited access to land resources for food production. This has contributed to the weakening of traditional agriculture and given rise to local food security problems.<sup>62</sup>
- 4.56 DFAT's submission highlighted sustainable fishing as an area for urgent action on nutrition and food security in the Pacific region,<sup>63</sup> advising:
- ...while the populations of many Pacific Island countries and territories are growing, coastal fisheries resources are declining. ... Within 15 years, it has been estimated that an additional 115 000 tonnes of fish will be needed across the region for good nutrition.<sup>64</sup>
- 4.57 The submission reported progress under a number of initiatives in the area including the new *Regional Roadmap for Sustainable Pacific Fisheries*, and the Community-Based Fisheries Management (CBFM), being trialled in Kiribati.<sup>65</sup> ACIAR's research over 2015 into the role of fish as a key source of nutrition across the broader India-Pacific region would support further policy making.<sup>66</sup>
- 4.58 In its submission, the OCTA acknowledged recent DFAT funded initiatives to improve nutrition through community-based aquaculture production in Fiji, Kiribati, Samoa.<sup>67</sup> However, the submission also identified a number of other areas where Australia could assist Forum Island Countries (FICs) to develop a more sustainable agriculture industry. In particular by:
- Assisting FICs to adopt 'less-intensive livestock farming practices that can guarantee sustainability and enable the them to produce quality livestock products' for existing niche markets, the needs of the middle income class and tourism.
      - Supporting more sustainable and productive smallholder agriculture, especially involving women and youth, 'by providing new dynamic markets and employment opportunities as well as access to finance'.
      - Addressing climate change at the pre-harvest stage by 'assessing current and possible crop varieties, as well as crop

62 Office of the Chief Trade Adviser – Pacific Island Forum Countries (OCTA-PIF), *Submission 7*, pp. 4, 6.

63 DFAT also noted that, while the coastal fisheries sector is of vital importance to support rural livelihoods, inshore fisheries provides a secondary income source for 50 per cent of coastal households in the region. DFAT, *Submission 12*, p. 17.

64 DFAT, *Submission 12*, p. 33.

65 DFAT, *Submission 12*, p. 18.

66 DFAT, *Submission 12*, p. 36.

67 OCTA-PIF, *Submission 7*, p. 8.

and livestock production systems to determine their climate resilience, and advanced farm management methods’.

- Developing an ‘understanding of climate change effects on existing commercial crops and pest and disease regimes, as well as considering ‘the benefits of increased access to irrigation and water efficiency technologies’.<sup>68</sup>

4.59 At present, many initiatives for agriculture development in the Pacific region are pursued in the context of trade and biosecurity. The Pacific Horticulture and Agriculture Market Access (PHAMA) program appears to be Australia’s key investment in agriculture development in the Pacific region, with a focus on increasing agricultural exports.<sup>69</sup> As part of this work, ACIAR partners with DFAT and seven Pacific countries to promote ‘an understanding of, and compliance with, biosecurity measures regulating trade in ginger, taro, papaya, breadfruit, mango among other commodities’.<sup>70</sup>

4.60 In its submission, the DAWR described its responsibilities under a number of partnership agreements designed to support ‘expanding exports, sustaining natural resources and managing biosecurity risk’.<sup>71</sup> These include: regulation of illegal fishing and logging;<sup>72</sup> reducing infectious diseases in livestock and poultry;<sup>73</sup> development of agricultural policy to support food security in India;<sup>74</sup> and biosecurity in cargo management.<sup>75</sup>

4.61 DAWR’s Deputy Secretary Ms Jo Evans, however, further advised that improving human health is not regarded as a strategic objective, although this may be incidental to core departmental activities:

Our main focus is on technical and economic partnerships to grow our portfolio related market opportunities and to manage

68 OCTA-PIF, *Submission 7*, p. 7.

69 Funded jointly by the Australian and New Zealand Government, DFAT has committed \$30.8 million over 2010–17, DFAT, *Submission 12*, p. 44.

70 See Box 3. ‘Partnerships for Enhanced Biosecurity for a Full List of Projects’ ACIAR, *Submission 34*, p. 10.

71 Department of Agriculture and Water Resources (DAWR), *Submission 33*, p. 1.

72 Indian Ocean Rim Association Economic Diplomacy Fund Regional fisheries engagement; Illegal Logging: Regional Capacity Building Partnership in the Asia Pacific, DAWR, *Submission 33*, p. 2, and see *Supplementary Submission 33.1*.

73 The Australia Indonesia Partnership for Emerging Infectious Diseases Animal Health Program Phase 2 (AIPEID2); The Timor-Leste Village Poultry Health and Biosecurity (VPHB) Program; Stop Trans boundary Animal Diseases and Zoo noses (STAN DZ); DAWR, *Submission 33*, pp. 3, 4.

74 Australian support for the OECD agricultural policy review of India; Department of Agriculture and Water Resources, *Submission 33*, p. 3.

75 Government Partnerships for Development project, DAWR, *Submission 33*, p. 4.

biosecurity risk...The areas we look for our co-operation activities to address include managing and responding to biosecurity risks. For example, we have a joint animal health surveillance program with Papua New Guinea and Timor-Leste. We also have an extensive program with Indonesia on looking for emerging infectious diseases.<sup>76</sup>

## Committee comment

- 4.62 This chapter has examined evidence submitted to the Sub-Committee's inquiry into the value of development partnerships in agriculture through a different lens. With the world demand for food more than doubling by 2050, it has never been more urgent to look closely at the inter-relationship between nutrition, food security and approaches to agricultural development.
- 4.63 Submissions to the inquiry, in addressing the terms of reference, have covered a wide range of factors which could promote or impair efforts to achieve food and nutrition security across the Indo-Pacific region. The evidence also demonstrated that there are many innovative approaches to agricultural development which have improved the local supply of nutritious foods, with opportunities to scale up production through engaging with the private sector.
- 4.64 Many of the projects described in evidence, but by no means all, have focused on women. The 'feminisation of agriculture' across the Indo-Pacific region has highlighted the need to transform both agriculture production and gender relations if the supply of affordable nutritious food is to be met.
- 4.65 The long history of work in Africa highlights the challenges this entails. Care Australia for example wrote of the plight of 'rural marginalised women, working on smallholder farming, raising cattle, or raising income through fishing or mining', noting:

These women are overloaded with productive and reproductive responsibilities, but have little access to the resources they produce. They own no farmland; in the pastoralist/agro-pastoralist communities they own no cattle or grazing land; and in the fishing communities they own no fishing gear.<sup>77</sup>

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76 Ms Evans, DAWR, *Proof Committee Hansard, Canberra* 29 February 2016, p. 1.

77 Care Australia, *Submission 10*, p. 2.

- 4.66 The detailed examination in the previous chapter of the dietary trends and their already alarming impacts in the Pacific region, and those emerging in South Asia, anticipates a new and necessary shift in focus to the immediate region under Australia's agricultural development programs.
- 4.67 At present many agricultural programs targeting Pacific Island nations are undeveloped. Successful multi-sectoral initiatives in poultry development in Papua New Guinea and Timor-Leste could profitably be extended across the Pacific region.
- 4.68 Work being done by ACIAR to promote the nascent cocoa industry in Samoa and Vanuatu also demonstrates the potential of cocoa production for niche market development.<sup>78</sup> The new SeedPacific initiative, being advanced under DFAT's innovationXchange,<sup>79</sup> also provides an opportunity to pilot multi-sector nutrition sensitive agriculture approaches in the region. The use of technology to improve health<sup>80</sup> should be partnered with agriculture and aquaculture innovation, in particular to improve outcomes for women under the TOMAK model pioneered in Timor-Leste.
- 4.69 Given the focus on biosecurity and key food security challenges in South East Asia and the Pacific region, there would appear to be a need to better co-ordinate Agriculture portfolio activities that have potential impacts on nutrition as well as food productivity and biosecurity. The Sub-Committee considers that the One Health model, as illustrated in **Case study 4.1**, provides a template to promote multi-sectoral partnerships to address malnutrition challenges in the region.
- 4.70 The Australian Government's focus on sustainable fishing in the Pacific region is a welcome development, being vital to both nutrition and regional food security. As discussed in Chapter three, the Pacific has rich culinary traditions which provide opportunities to enjoy tasty, inexpensive and nutritious foods. In its submission, DFAT has referred to a range of Pacific-based initiatives on fishery management, and has also reported on the new investment in the Indian Blue Economy Aquaculture Challenge agreement to deliver both nutrition and socio-economic benefits to the poor in Indian Ocean Rim nations.<sup>81</sup>

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78 ACIAR, *Submission 34*, p. 20.

79 DFAT, *Submission 12*, Case Study Box, p. 40.

80 DFAT, Correspondence to the Sub-Committee Chair, 27 October 2015.

81 A three-million dollar aid investment, the Blue Economy Aquaculture Challenge was agreed during the Indian Ocean Rim Association (IORA) Council of Ministers Meeting in Padang, Indonesia on 23 October 2015. DFAT advises that the 'Challenge is the culmination of extensive work by DFAT's innovationXchange, in partnership with CSIRO, to identify areas

- 4.71 The Sub-Committee anticipates that, in the context of the Government's commitments to integrate a nutrition focus into aquaculture management across the Pacific region, an agreement similar to the Blue Economy Aquaculture Challenge could be made with partner organisations in the Pacific region. This will be important in the context of balancing the many challenges involved in sustainable ocean management, including the growing competition between commercial and subsistence fisheries.<sup>82</sup>
- 4.72 There is a clear nexus between women, agriculture and good nutrition and health. The Sub-Committee was pleased to see advances for women in agriculture are being considered in the context of the Australian Government's commitment to integrate gender and nutrition programs.
- 4.73 Successful work to date by ACIAR and the CSIRO, with research and development partnerships across the range of sectors, demonstrates the potential that empowering women farmers has to improve nutrition and promote sustainable community level development across the region.
- 4.74 The Sub-Committee also commends ACIAR for its role in supporting women to be decision-makers under its agricultural development programs. Its scholarship and fellowship programs are also sensitively providing opportunities for women researchers to advance food and nutrition development programs.
- 4.75 It is now time for the Government to build on this work through dedicated investment in the Pacific region, with promising complementarities under the Pacific Women Shaping Pacific Development<sup>83</sup> initiative to ensure women's voices are being heard, and priorities set, with nutrition and well-being are at the centre of the region's future development agenda.
- 4.76 Recommendations to advance these objectives are made in the final chapter.

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that have potential for transformative change in the "Blue Economy". See DFAT, *Submission 12*, p. 9.

82 See discussion Australian Institute of Marine Sciences, *Submission 53*, pp. 2-3.

83 As noted in previous Sub-Committee reports, the Pacific Women Shaping Pacific Development (Pacific Women) program is a \$320 million over 10 years aid commitment by the Australian Government to improve the political, economic and social opportunities of Pacific women. See Australian Aid, Pacific Women Shaping Pacific Development <[www.pacificwomen.org/](http://www.pacificwomen.org/)> viewed 20 April 2016.



## Future directions for nutrition security

- 5.1 This Chapter considers possible future directions for the Australian aid program's work on nutrition in the Indo-Pacific region.
- 5.2 As a point of reference for this review, the discussion first examines the results of a recent evaluation of Australia's aid investments in nutrition conducted by the Office of Development Effectiveness, the recommendations of which have implications for future aid programming and policy co-ordination in this area.
- 5.3 The second part of the Chapter looks at the role of innovation, which holds considerable potential to not only help maximise nutrition outcomes in future, but also make more effective use of Australia's existing Overseas Development Assistance (ODA) resources. In the final part, the Sub-Committee provides its concluding comments and recommendations.

### **Prioritising child and maternal nutrition**

- 5.4 Over the past decade, a major focus of global nutrition efforts has been on addressing child and maternal nutrition. The respected medical journal *The Lancet* through its publication of two separate series of scholarly articles on maternal and child undernutrition (in 2008 and 2013) has been influential in drawing greater attention to the issue. Specifically, the articles in these series have provided the body of evidence for the 'first 1000 days' approach, which targets aid interventions in the period from early pregnancy to a child's second birthday.<sup>1</sup> Reflecting this development

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1 M Toole, 'Stunted Growth and Obesity: the Double Burden of Poor Nutrition on Our Doorstep', *The Conversation*, 24 March 2016 <[theconversation.com/stunted-growth-and-obesity-the-double-burden-of-poor-nutrition-on-our-doorstep-50385](http://theconversation.com/stunted-growth-and-obesity-the-double-burden-of-poor-nutrition-on-our-doorstep-50385)> viewed 4 April 2016.

- priority, the World Health Assembly's global nutrition targets (adopted in 2012) focus exclusively on child and maternal nutrition.<sup>2</sup>
- 5.5 As outlined in chapter two, Australia's own aid policy settings recognise and prioritise the need to address child and maternal nutrition. Australia's development policy *Australian Aid: Promoting Prosperity, Reducing Poverty, Enhancing Stability* notes that Australia will strengthen its focus on nutrition as part of its commitments to improve maternal and child health.<sup>3</sup> The Australian Government's *Health for Development Strategy 2015-2020*, commits DFAT to pursue aid investments, among other things, in nutrition during the first 1 000 days of life and during a girl's adolescence.
- 5.6 Reflecting the Government's intention to advance this issue, the Office of Development Effectiveness (ODE) recently conducted an evaluation of the quality of Australia's aid investments in nutrition, with a particular focus on child undernutrition.<sup>4</sup>
- 5.7 The results of this evaluation were detailed in ODE's report entitled *A Window of Opportunity: Australian Aid and Child Undernutrition*, which was released in April 2015. In its report, the ODE makes six recommendations on areas of improvement to maximise the return on Australia's nutrition investments.<sup>5</sup>
- 5.8 DFAT agreed with recommendations 1, 2, 4 and 5, and agreed in part with recommendations 3 and 6.<sup>6</sup> These are listed on the table below, together with a summary of how DFAT has responded to each to date.

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2 WHO, *Comprehensive Implementation Plan on Maternal, Infant and Young Child Nutrition*, Resolution WHA65.6, 65<sup>th</sup> World Health Assembly, Geneva, 21–26 May 2012.

3 DFAT, *Australian Aid: Promoting Prosperity, Reducing Poverty, Enhancing Stability*, Canberra, June 2014, p. 22.

4 The Office of Development Effectiveness (ODE) is an operationally independent unit within DFAT that measures and reports on the effectiveness of the Australian aid program. For further information, see: DFAT, 'About ODE', <[dfat.gov.au/aid/how-we-measure-performance/ode/aboutode/Pages/about-ode.aspx](http://dfat.gov.au/aid/how-we-measure-performance/ode/aboutode/Pages/about-ode.aspx)> viewed 13 April 2016.

5 ODE, *A Window of Opportunity: Australian Aid and Child Undernutrition*, Canberra, April 2015, p. 5 <[dfat.gov.au/aid/how-we-measure-performance/ode/Documents/a-window-of-opportunity-australian-aid-and-child-undernutrition-2015.pdf](http://dfat.gov.au/aid/how-we-measure-performance/ode/Documents/a-window-of-opportunity-australian-aid-and-child-undernutrition-2015.pdf)> viewed 13 April 2016.

6 ODE, *A Window of Opportunity: Australian Aid and Child Undernutrition*, Canberra, April 2015, Table 1.0: 'DFAT's Management Response to Recommendations for Improving Nutrition Policy, Planning and Implementation', pp. 7–8.

Table 5.1 ODE Review: *A Window of Opportunity*—recommendations and DFAT's responses<sup>7</sup>

<p><b>Recommendation 1:</b> <i>DFAT should improve its tracking of nutrition spend by strengthening the quality of reporting in the aid management system AidWorks. To achieve this, the Canberra-based Nutrition Working Group should provide guidance and training to staff on how to document nutrition objectives and indicators.</i></p>
<p>DFAT notes it will continue to build its capacity to articulate and track nutrition as an outcome across its aid portfolio.</p> <p>The Department advises that it currently reports aid expenditure on nutrition by using the methodology developed by the Scaling Up Nutrition (SUN) Movement, of which Australia is a donor member. This methodology is currently under review by the SUN Donor Network and DFAT is participating in that review process. Changes to the methodology will be reflected in reporting processes.</p> <p>DFAT notes that guidance to staff on nutrition, including new operational guidance notes, multi-sectoral approaches and the tagging of investments, is being delivered through training (workshops, presentations and seminars), ongoing communications via DFAT's Nutrition Network, and a nutrition collaboration site on DFAT's intranet.</p>
<p><b>Recommendation 2:</b> <i>DFAT posts should ensure that the proportion of ODA invested in partner countries to address child undernutrition is appropriate given partner government priorities, the prevalence of stunting, investments by other donors and opportunities to achieve results.</i></p>
<p>Progress is ongoing. DFAT has noted that its aid operations are highly country and context specific, while aligned to Australia's development policy, <i>Australian Aid: Promoting Prosperity, Reducing Poverty, Enhancing Stability</i>. The department's geographic and thematic areas allocate funding for nutrition as appropriate. Funding decisions are made with consideration to pursuing Australia's national interest, promoting growth and reducing poverty, reflecting Australia's value-add and leverage, and its aid focus on making performance count.</p> <p>DFAT advises that its Development Policy Division encourages the department's programs to consider nutrition investments as appropriate, taking account of stunting and other nutrition indicators, partner government priorities, the political economy context, and opportunities to achieve results.</p>
<p><b>Recommendation 3:</b> <i>DFAT posts should review existing and planned initiatives in the agriculture, food security, water and sanitation, social protection, and health sectors, and include nutrition objectives, interventions and indicators where relevant. Australia's large investments in the food security and health sectors offer opportunities to leverage existing spend to achieve nutrition outcomes.</i></p>

7 Information in this table drawn from Exhibit 24: DFAT, 'Update on Implementations from ODE Report – *A Window of Opportunity*', April 2016.

DFAT notes that it is adopting nutrition-sensitive approaches, as appropriate, across its agriculture, food security, water, sanitation and hygiene, social protection, health, and education investments, including in humanitarian settings. It recognises this is important for improving nutrition, as well as helping it to achieve better performance and value for money. It also sees this as an opportunity to contribute to the evolving global evidence base on applying nutrition-sensitive approaches.

DFAT states that progress has already been made in helping staff integrate nutrition into a range of multi-sectoral investments. It has been working to build its professional capacity for nutrition-sensitive agriculture by developing resources and guidance materials, including through its partnerships with CSIRO and ACIAR. These materials complement DFAT's own collection of operational guidance notes:

- *Social Protection and Nutrition* (April 2015)<sup>8</sup>;
- *Nutrition-Sensitive Agriculture* (August 2015)<sup>9</sup>;
- *Getting the Foundations Right: Early Childhood Development and Australia's Aid Program* (September 2015);<sup>10</sup>
- *Nutrition and Health in Australia's Aid Program* (December 2015);<sup>11</sup> and
- *Nutrition in Australia's Aid Program* (December 2015).<sup>12</sup>

A further guidance note on water, sanitation and hygiene (WASH), including in relation to nutrition, is also planned.

**Recommendation 4:** *DFAT should improve targeting of nutrition interventions to specific life stages, to women and to vulnerable populations. Gender analysis should be used to inform the design and monitoring and evaluation of initiatives, and nutrition data should be disaggregated by a range of equity markers.*

DFAT advises that is committed to pursuing evidence-based nutrition investments, including adopting a life-cycle approach focusing on the '1 000 days plus' window of opportunity for nutrition. In line with its Aid Programming Guide, the department states that it is also committed to ensuring design of all aid investments, including those supporting nutrition outcomes, are informed by quality analysis, including gender, poverty and social analysis. It notes that its operational guidance on nutrition reiterates this message.

8 *Exhibit 28: DFAT Social Protection and Nutrition, Guidance Note, 2015.*

9 *Exhibit 27: DFAT, Operational Guidance Note: Nutrition-Sensitive Agriculture, 2015.*

10 *Exhibit 23: DFAT, Getting the Foundations Right: Early Childhood Development and Australia's Aid Program, Operational Guidance Note, 2015.*

11 *Exhibit 22: DFAT, Nutrition and Health in Australia's Aid Program, Operational Guidance Note, 2015.*

12 *Exhibit 21: DFAT, Nutrition in Australia's Aid Program, Operational Guidance Note, 2015.*

**Recommendation 5:** *DFAT should improve the monitoring and evaluation of nutrition investments by increasing the use of outcome indicators, especially stunting for longer term initiatives. In nutrition-sensitive sectors such as agriculture, for which evidence of the effectiveness of interventions is lacking, DFAT should prioritise nutrition monitoring and evaluation to contribute to the body of evidence of what works.*

DFAT has undertaken to provide staff with guidance and training to strengthen nutrition monitoring and evaluation. The department advises that its Performance and Quality Network, which has responsibility for quality assurance in relation to DFAT's aid investments, is being sensitised to good practice in monitoring and evaluation for nutrition.

In addition, DFAT has noted the importance of having its program areas work with partner governments to strengthen national monitoring and evaluation systems, including for nutrition, given its commitment to good aid practices.

**Recommendation 6:** *DFAT should develop an overarching cross-sectoral nutrition strategy that links nutrition investments with the government's six main aid investment priorities. Posts should incorporate nutrition into their Aid Investment Plans, with Canberra providing guidance on how the principles of best practice can be applied in different country contexts.*

DFAT advises that it does not plan to develop an overarching cross-sectoral nutrition strategy. Instead it states that it has articulated the importance of nutrition for economic growth and poverty reduction through other documents, including its operational guidance notes on nutrition and relevant DFAT sectoral aid strategies, including:

- the *Health for Development Strategy 2015-2020* (June 2015);<sup>13</sup>
- the *Strategy for Australia's Aid Investments in Agriculture, Fisheries and Water* (February 2015);<sup>14</sup> and
- the *Strategy for Australia's Aid Investments in Education 2015-2020* (September 2015).<sup>15</sup>

DFAT notes that its Development Policy Division continues to provide guidance and support to ensure nutrition is appropriately reflected in Aid Investment Plans. Technical support is available to DFAT staff to ensure best-practice nutrition approaches in investment, with additional external support provided by the DFAT-funded Specialist Health Service.<sup>16</sup>

13 DFAT, *Health for Development Strategy 2015-2020*, Canberra, June 2015.

14 DFAT, *Strategy for Australia's Aid Investments in Agriculture, Fisheries and Water*, Canberra, February 2015.

15 DFAT, *Strategy for Australia's Aid Investments in Education 2015-2020*, Canberra, September 2015.

16 For further information see the Specialist Health Service, 'The Specialist Health Service', <shsglobal.com.au/> viewed 13 April 2016.

## Committee's assessment

- 5.9 The Sub-Committee observes that DFAT, on the basis of evidence presented above, appears to be making progress towards ODE's recommendations. Of particular note is the Department's work in developing the series of operational guidance notes on nutrition and other relevant cross-sectoral topics (on nutrition-sensitive agriculture, social protection, early childhood development), as set out above.<sup>17</sup>
- 5.10 Notwithstanding this, DFAT does not appear to have reviewed its position on ODE Recommendation 6, 'to develop an overarching cross-sectoral nutrition strategy'.<sup>18</sup> The Sub-Committee considers that the Department should review its position on this matter. Its view is that according a higher priority to nutrition in terms of Australia's current development policy settings is clearly warranted. Given the evidence considered in this report, the Sub-Committee believes that the Department should give higher level priority to nutrition in Australia's overall development policy settings. Indeed, given the scale and urgency of the 'double burden' challenge at our immediate doorstep, the Sub-Committee recommends going beyond ODE's original recommendation by proposing that a whole-of-government strategy on nutrition be developed. An overarching strategy of this kind would encompass not only Australia's nutrition work under the aid program, but all of Australia's international engagement on nutrition issues.
- 5.11 The Sub-Committee's view is that such a strategy would help improve nutrition policy and programming co-ordination across relevant Australian government agencies, as well as enhancing Australia's policy coherence internationally in this area, including through its representation in key global and regional fora.
- 5.12 Moreover, in other areas, it is not clear that DFAT has advanced its commitments.<sup>19</sup> For example, in relation to Recommendations 4 and 5, DFAT had advised earlier that its operational guidance on nutrition would instruct staff to use and advocate for appropriately disaggregated nutrition data by gender, as well as providing guidance on strengthening nutrition

17 Exhibit 21: DFAT, *Nutrition in Australia's Aid Program, Operational Guidance Note*, 2015; Exhibit 22: DFAT, *Nutrition and Health in Australia's Aid Program, Operational Guidance Note*; 2015. DFAT, Exhibit 23: DFAT, *Getting the Foundations Right: Early Childhood Development and Australia's Aid Program, Operational Guidance Note*, 2015; DFAT, Exhibit 27: DFAT, *Operational Guidance Note: Nutrition-Sensitive Agriculture*, 2015; Exhibit 28: *Guidance Note: Social Protection and Nutrition*, Canberra, April 2015.

18 ODE, *A Window of Opportunity: Australian Aid and Child Undernutrition*, Canberra, April 2015, p. 8.

19 ODE, *A Window of Opportunity: Australian Aid and Child Undernutrition*, Canberra, April 2015, pp. 7-8.

monitoring and evaluation. However, DFAT's recently released operational guidance notes on nutrition do not appear to cover these issues in any detail.<sup>20</sup>

## The role of innovation

- 5.13 The promotion of innovation has been a relatively recent area of focus in the context of work on international development.<sup>21</sup> Over the past decade, leading international donors, notably the United States, the United Kingdom and the Bill and Melinda Gates Foundation, have been active in championing the role of innovation in tackling major development challenges.<sup>22</sup> The Australian Government has also made important commitments to innovation in the aid program, as evidenced through the launch of DFAT's innovationXchange in March 2015 and its support for the Global Innovation Fund.<sup>23</sup>
- 5.14 Despite these recent international efforts, interpretations of what innovation means in practical terms from a development perspective vary widely.<sup>24</sup> In July 2015, the United States Agency for International Development (USAID) – with support from eleven other donor organisations, including DFAT – launched a *Call for Innovation in International Development*. As well as outlining a core set of best practice principles for pursuing innovation in the development field, the document provides the following definition:

From a development perspective, an innovation is a new solution with the transformative ability to accelerate impact. Innovation can be fuelled by science and technology, can entail improved ways of working with new and diverse partners, or can involve new social

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- 20 See for example, *Exhibit 27: DFAT, Operational Guidance Note: Nutrition-Sensitive Agriculture*, 2015 and *Exhibit 28: Guidance Note: Social Protection and Nutrition*, April 2015.
- 21 U Krause, 'Innovation: The New Big Push or the Post-Development alternative?', *Development*, Vol. 56, June 2013, pp. 223–26.
- 22 See the United States Agency for International Development (USAID), 'US Global Development Lab', <[usaid.gov/who-we-are/organization/bureaus/us-global-development-lab](http://usaid.gov/who-we-are/organization/bureaus/us-global-development-lab)> viewed 11 April 2016; DFID, 'Jonathan Wong, Head of DFID's Innovation Hub' <[dfid.blog.gov.uk/author/jonathan-wong-head-of-dfid-s-innovation-hub/](http://dfid.blog.gov.uk/author/jonathan-wong-head-of-dfid-s-innovation-hub/)> viewed 11 April 2016; 'Gates Tells G20 Innovation is the Key to Development', *Sci Dev Net*, 4 November 2011, <[scidev.net/global/networks/news/gates-tells-g20-innovation-is-the-key-to-development.html](http://scidev.net/global/networks/news/gates-tells-g20-innovation-is-the-key-to-development.html)> viewed 11 April 2016.
- 23 DFAT, *Submission 12*, p. 9; 'Major Donors Launch New Fund to support Innovation', *Devex*, 24 September 2014 <[devex.com/news/major-donors-launch-new-fund-to-support-innovation-84406](http://devex.com/news/major-donors-launch-new-fund-to-support-innovation-84406)> viewed 11 April 2016.
- 24 D Lewis, 'Is Innovation Essential for Development Work?', *The Guardian*, 25 July 2012, <[theguardian.com/global-development/poverty-matters/2012/jul/25/innovation-development-funding-capability](http://theguardian.com/global-development/poverty-matters/2012/jul/25/innovation-development-funding-capability)> viewed 11 April 2016.

and business models or policy, creative financing mechanisms, or path-breaking improvements in delivering essential services and products. Innovation has been and will be pivotal for reaching sustained, scalable solutions to the world's complex problems.<sup>25</sup>

- 5.15 In the field of nutrition, progress in pursuing innovation can be categorised into the following three broad areas:
- **Partnerships, approaches and funding modalities:** exploring innovative ways to partner with key stakeholders and across relevant sectors, as well as identifying new financing sources and mechanisms, in support of enhanced nutrition outcomes.
  - **Policy environment:** innovating to improve the enabling policy environment for scaling up nutrition, including through: strengthening institutional and human capacity; enhancing national-level strategic planning, monitoring and accountability processes; and strengthening the evidence-base for sound policy decision-making.
  - **Scientific and technological advances:** harnessing breakthroughs in agricultural and food science and technology, as well as developing and using innovative information and communication technology (ICT) to promote improved nutrition.<sup>26</sup>
- 5.16 These categories are outlined briefly below, drawing on recent Australian and international examples.

### Partnerships, approaches and funding modalities

- 5.17 A number of the inquiry's written submissions have pointed to the importance of innovating through integrated, multi-sectoral, multi-stakeholder partnerships in order to address major development challenges, including in relation to nutrition.
- 5.18 DFAT's submission noted, for example, that its development partnerships – with a range of actors, including businesses, NGOs, research and academic institutions, partner governments and other international donors – were an essential vehicle for driving innovation.<sup>27</sup> DFAT also stated that its partnerships enabled it to achieve scale and improve the effectiveness of its aid investments by leveraging a wide range of expertise, creativity, networks and resources.<sup>28</sup>

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25 USAID, *A Call for Innovation in International Development*, 14 July 2015, p. 1 <[usaid.gov/sites/default/files/documents/15396/ACallInnovationInternationalDevelopment.pdf](http://usaid.gov/sites/default/files/documents/15396/ACallInnovationInternationalDevelopment.pdf)> viewed 11 April 2016.

26 DFAT, *Submission 12*, pp. 8–9.

27 DFAT, *Submission 12*, p. iii.

28 DFAT, *Submission 12*, p. 10.

- 5.19 DFAT's innovationXchange noted it was currently piloting an innovation process called LAUNCH to source, support and scale innovations that address the double burden of nutrition in the Pacific region. The complex, multi-sectoral nature of this challenge aligns with the innovationXchange's remit to catalyse change through new approaches to facilitation, experimentation and networking. At the time of writing this report, the LAUNCH design process was expected to commence in mid-May 2016, with a 'Big Think' event, followed by technical discussions and an open call for innovations. Within 6–9 months, the innovationXchange aims to invest, alongside external partners, in several innovations to advance the health and lives of people in the Pacific.<sup>29</sup>
- 5.20 The University of Sydney's submission gave an example of how it was pursuing cross-sectoral collaboration to nurture innovation through the establishment of a new research and education hub. The hub, comprising a team of 34 researchers drawn from various faculties both within and outside the University has been looking at the challenges to nutrition, diversity and food safety from a range of perspectives, with the ultimate goal of creating healthier and more sustainable communities. Members of the multidisciplinary team are involved in food and nutrition security research encompassing maternal and child health and nutrition, food security, water security, social anthropology, food systems, animal diseases and health problems, and value chain analysis.<sup>30</sup>
- 5.21 As seen in other fields of international development, innovative partnerships with the private sector are playing an increasingly important role in effectively scaling up and sustaining improved nutrition outcomes.<sup>31</sup>
- 5.22 This reflects the fact that ODA funding is small relative to private sector finance. In developing countries, the private sector funds 60 per cent of all investments, provides 90 per cent of jobs, and accounts for 80 per cent of finance flows. Given these factors, donors can potentially achieve a far larger development impact if they use ODA funding to leverage private sector resources.<sup>32</sup> Private sector partners also have specialist expertise in the fields of nutritious product development, income generation, supply-chain development, management, and consumer behaviour.

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29 *Exhibit 29: DFAT, Innovation Exchange initiatives – Nutrition in Timor -Leste and Food for Nutrition Launch – LAUNCH.*

30 University of Sydney, *Submission 46*, p. 1.

31 JSCFADT, *Inquiry into the role of the private sector in promoting economic growth and reducing poverty in the Indo-Pacific Region, Global Alliance for Improved Nutrition (GAIN), Submission 107*, p. 4.

32 DFAT, *Submission 12*, p. 8.

Moreover, they often have the in-country presence to effectively broker and implement interventions.<sup>33</sup>

- 5.23 The Global Alliance on Improved Nutrition (GAIN) is one leading organisation that is actively leveraging private sector resources and expertise to address nutrition issues. GAIN is an independent non-profit body established in 2002 by OECD DAC donors and United Nations (UN) agencies, with a major investment by the Bill and Melinda Gates Foundation, to develop innovative partnerships with the private sector and explore sustainable, market-based solutions to malnutrition.<sup>34</sup>
- 5.24 Under GAIN, the Amsterdam Initiative against Malnutrition (AIM), comprising 30 partners including large corporations such as Unilever and Rabobank, works at multiple levels of value chains to make nutritious foods more accessible to poor consumers.<sup>35</sup> AIM projects are designed to encourage product innovation, value chain optimisation and the use of locally-produced ingredients. Its goal is to create systemic change and address barriers to market entry for nutritious products.<sup>36</sup>
- 5.25 On identifying innovative financing mechanisms, the *Global Nutrition Report 2015* notes that nutrition can benefit from the experience of the health sector, where a wide range of such mechanisms have been tested over the past 15 years.<sup>37</sup> As an example, it cites UNITAID, a Geneva-based public-private partnership which receives revenues from a solidarity levy on airline tickets, and uses the revenues to shape markets and lower prices for commodities such as paediatric AIDS drugs and second-line tuberculosis drugs.<sup>38</sup>

## Policy environment

- 5.26 Evidence suggests that policymaking innovations are an important tool for strengthening the enabling environment for enhanced nutrition in

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33 Accenture, *Project Laser Beam: Lessons from a Five-Year, Global Public-Private Partnership Addressing Child Undernutrition: Final Conclusions*, September 2014, p. 12.

34 JSCFADT, *Inquiry into the role of the private sector in promoting economic growth and reducing poverty in the Indo-Pacific region*, Global Alliance for Improved Nutrition (GAIN), *Submission 107*, p. 4.

35 DFAT, *Submission 12*, p. 35.

36 GAIN, *GAIN Annual Report 2014-2015*, Geneva, 2015, p. 14.

37 IFPRI, *Global Nutrition Report 2015*, Washington DC, 2015, p. 67.

38 IFPRI, *Global Nutrition Report 2015*, Washington DC, 2015, p. 67. Several new financing mechanisms focused on nutrition have already emerged. One of these, UNITLIFE, launched in 2014, is built on the UNITAID model. UNITLIFE taps revenues generated from a micro levy on oil production—currently set at USD 0.10 per barrel—in participating countries. Seven African countries have agreed to implement the levy, and one (Congo) has started to earmark it, collecting USD 5 million in the first year at p. 68 of the IFPRI, *Global Nutrition Report*.

developing countries. For example, with support from international partner organisations including the FAO, UNICEF and DFAT, the Government of Timor-Leste has been playing a lead role in establishing an enabling policy environment that addresses the country's food security and nutrition challenges. In 2014, it launched its comprehensive national *Zero Hunger Challenge (ZHC)* and its associated *ZHC National Action Plan for a Hunger and Malnutrition Free Timor-Leste*. The ZHC promotes the critical role that agriculture plays in good nutrition by clearly recognising the intrinsic links that exist between nutrition, agriculture and economic growth for the majority of the rural population. In addition, DFAT supported the development of the recently endorsed *National Nutrition Strategy 2015-2019* and costed action plan.<sup>39</sup> It also helped the Timor-Leste President's office to initiate annual Nutrition Awards to raise community awareness of the nutrition situation.<sup>40</sup>

- 5.27 Innovative partnership platforms that provide a common framework for work on nutrition at the national level can also help to strengthen the enabling policy environment. A key global platform that promotes country-led actions is the Scaling Up Nutrition (SUN) Movement. Countries that join the SUN movement are expected to create a coherent policy and legal basis for nutrition policies, work in partnership with stakeholders, agree on shared objectives, and mobilise resources for scaling up nutrition.<sup>41</sup> Members are also required to adhere to common monitoring and evaluation arrangements.<sup>42</sup>
- 5.28 As of April 2016, the SUN Movement had 56 developing country members. The Asia-Pacific region is currently represented by 12 members (Bangladesh, Cambodia, Indonesia, Kyrgyzstan, Laos, Myanmar, Nepal, Pakistan, Philippines, Sri Lanka, Tajikistan and Vietnam), but as yet no Pacific Island countries have joined.<sup>43</sup>
- 5.29 Australia and other donors can play a constructive role in sharing information with partner developing countries about their own experiences – covering both success and failures – in designing and implementing domestic policy innovations in the nutrition and health areas. A recent example is the Health Star Rating (HSR) system, which was developed by the Australian federal, state and territory governments in

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39 DFAT, *Submission 12*, p. 36.

40 Dr Julie Delforce, Senior Sector Specialist, Agricultural Development and Food Security, Agricultural Productivity and Food Security Section, Agriculture and Food Branch, Office of Trade Negotiations, DFAT, *Committee Hansard*, 22 February 2016, pp. 7-8.

41 IFPRI, *2013 Global Food Policy Report*, Washington DC, 2014, p. 25.

42 Scaling Up Nutrition (SUN) Movement, *SUN Movement Annual Progress Report 2015*, pp. 117-23.

43 SUN Movement, '*SUN Countries*' <[scalingupnutrition.org/sun-countries](http://scalingupnutrition.org/sun-countries)> viewed 11 April 2016.

collaboration with industry, public health and consumer groups. The HSR system is a labelling system that rates the overall nutritional value of packaged foods and assigns them a rating from one to five stars. In April 2015, the Fijian Ministry of Health and Medical Services wrote to Australia's Department of Health (DoH) seeking permission to use the HSR system in Fiji. In its June 2015 response, DoH welcomed Fiji's interest in implementing the HSR system, while also noting that a number of legal, technical and regulatory issues underpinning the HSR system would need to be considered by Fiji in the event that it were to introduce the HSR.<sup>44</sup>

- 5.30 Innovations to improve access to reliable and timely data on relevant nutrition indicators, at the global, national, and subnational levels, are also critical to sound, evidence-based policymaking.<sup>45</sup> In the Asia-Pacific region, for example, the FAO has noted that many countries lack basic data and appropriate indicators with which to evaluate and monitor the nutrition landscape.<sup>46</sup> Data collection and analytical capacity in developing countries, particularly in terms of statistical infrastructure and human capital, also need to be improved significantly.<sup>47</sup>
- 5.31 One current initiative, involving DFAT's innovationXchange, appears to have considerable potential to help address this problem. Announced by Australia's Foreign Minister, the Hon Julie Bishop MP, in March 2015, Australia is contributing AUD 20 million to a USD 100 million partnership with Bloomberg Philanthropies on Data for Health.<sup>48</sup>
- 5.32 The partnership, which will reach one billion people across 20 countries, is aimed at building the capacity of governments in developing countries to collect and use vital health information to build better health systems. Globally, 65 per cent of deaths have no documented cause, and 40 million children are born without a birth certificate.<sup>49</sup> The partnership will improve health information in three ways: improving data on births and deaths;

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44 DoH, *Submission 9*, p. 3.

45 IFPRI, *2013 Global Food Policy Report*, Washington DC, 2014, pp. 26–27.

46 FAO, *Round Table on the Double Burden of Malnutrition*, Document No. APRC/14/9, FAO Regional Conference for Asia and the Pacific, 32nd Session, Ulaanbaatar, Mongolia, 10–14 March 2014, p. 4.

47 IFPRI, *Global Food Policy Report 2013*, Washington DC, 2014, p. 27.

48 The Hon Julie Bishop MP, Minister for Foreign Affairs, 'innovationXchange – Australia's New Aid Paradigm', *Media Release*, 23 March 2015.

49 DFAT, 'Research and Innovation Initiatives', <[dfat.gov.au/aid/topics/investment-priorities/education-health/health/Pages/research-and-innovation-initiatives.aspx](http://dfat.gov.au/aid/topics/investment-priorities/education-health/health/Pages/research-and-innovation-initiatives.aspx)> viewed 13 April 2016.

conducting mobile phone surveys on health risk factors; and improving policymakers' use of health data.<sup>50</sup>

## Scientific and technological advances

- 5.33 Evidence suggests that the application of innovative agricultural and food technologies is a valuable tool in the global effort to improve nutrition and health. One key example is through the use of food fortification and biofortification technologies in the provision of micronutrients, which are critical component of good nutrition. In particular, folate, iodine, iron, vitamin A and zinc are important for healthy and productive populations. Without them children develop birth defects, blindness and an inability to learn properly, among other long-term disabilities.<sup>51</sup> The Copenhagen Consensus Center has estimated that investing USD 1.2 billion annually in the use of micronutrient supplements, food fortification and biofortification of staple crops for five years would generate annual benefits worth USD 15.3 billion, representing a benefit-to-cost ratio of almost 13 to 1.<sup>52</sup>
- 5.34 Chapter four has detailed a number of food fortification initiatives in the region. The Sub-Committee notes that DFAT is currently supporting a biofortification pilot project in Zambia through the innovative multi-donor initiative AgResults (launched by the G20 in 2012).<sup>53</sup> GAIN has also worked extensively in this area. To date, its food fortification program has reached almost one billion people in 40 countries.<sup>54</sup>
- 5.35 A recent GAIN food fortification project in Indonesia is featured at **Case study 5.1**, overleaf.

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50 DFAT innovationXchange, 'Better Data for Health Partnership', <innovationxchange.dfat.gov.au/project/better-data-health-partnership> viewed 11 April 2016.

51 JSCFADT, Inquiry into the Role of the Private Sector in Promoting Economic Growth and Reducing Poverty in the Indo-Pacific Region, GAIN, *Submission 107*, p. 4.

52 FAO, *The State of Food and Agriculture 2013: Food Systems for Better Nutrition*, Rome, 2013, p. 5.

53 DFAT, *Submission 12*, p. 37.

54 GAIN, *Annual Report 2014-2015*, Geneva, 2015, p. 7.

### Case study 5.1 GAIN food fortification

#### **Reducing stunting and vitamin A deficiency in Indonesia**

In Indonesia 40 per cent of children under the age of five are stunted. One in five preschool age children in the country are deficient in vitamin A, which seriously weakens immune systems.

GAIN partnered with the Ministry of Health and private sector oil producers on a major food fortification project. This multi-sector partnership was designed to reach 80 per cent of the population with vitamin A fortified vegetable oil.

GAIN invested USD 3.5 million over five years to support oil refineries with the necessary equipment and training to produce fortified unbranded vegetable oil. These funds also enabled the oil industry to buy the vitamins and minerals through the GAIN Premix Facility. The project has worked with the leading Indonesian certified vegetable oil producers and 75 per cent of the program is financed by the industry for a total of USD 16 million over five years.

As a result, there have been significant reductions in Vitamin A deficiency in Indonesia. Elsewhere in Asia, the potential to reduce micronutrient deficiencies, and the resultant disease burden, has not yet been realised – and presents an opportunity for high impact interventions between governments and private sector partners.

*Source* JSCFADT, *Inquiry into the Role of the Private Sector in Promoting Economic Growth and Reducing Poverty in the Indo-Pacific Region*, GAIN, Submission 107, p. 5.

- 5.36 Innovations in the use of information and communication technology (ICT) also appear to have potential to support enhanced nutrition outcomes. For example, a number of international donors, developing country governments and NGOs have started to integrate mobile phones into their nutrition programs.<sup>55</sup> UNICEF recently employed mobile phones in nutrition surveillance in Kenya and Malawi, and World Vision together with the Institute of Development Studies is piloting a mobile phone application for community-level surveillance in Indonesia.<sup>56</sup>
- 5.37 Similarly, DFAT's innovationXchange is currently working with the department's Timor-Leste program to test a new approach to tackling malnutrition by influencing behaviour with targeted messaging delivered through existing health, agriculture and water, sanitation and hygiene programs using mobile phone technology. The pilot will begin with human-centred design research to better understand the drivers of nutrition behaviour at community level and foster creative thinking on new platforms to increase impact on households' nutrition practices. The pilot

55 I Barnett, 'Can Mobile Phones Help Fight Against Malnutrition', *The Guardian*, 5 September 2014, <[theguardian.com/global-development-professionals-network/2014/sep/04/mobile-phones-fight-against-undernutrition](http://theguardian.com/global-development-professionals-network/2014/sep/04/mobile-phones-fight-against-undernutrition)> viewed 11 April 2016.

56 IFPRI, *Global Nutrition Report 2015*, Washington DC, 2015, p. 116.

builds on an effective program already underway in Timor-Leste that uses a mobile phone platform to improve the reach of neo-natal care services.<sup>57</sup>

## Committee comment

5.38 In its response to ODE's April 2015 evaluation of the quality of Australia's nutrition investments, DFAT asserted:

Australia has been proactive in refocusing our nutrition approach to take account of the double burden of under and overnutrition, particularly in the Indo-Pacific region, putting us 'ahead of the game' globally.<sup>58</sup>

5.39 While the Sub-Committee is pleased to see that a number of positive steps have been taken recently by DFAT, ACIAR and other relevant Australian government agencies in addressing nutrition issues, the Sub-Committee questions whether these efforts are enough given the scale of the 'double burden' of malnutrition in Pacific island countries and elsewhere in the Indo-Pacific region.

5.40 Certainly, in terms of global aid funding for nutrition, Australia's own contribution in this area is well below par. Australia's 'nutrition-specific' ODA funding in 2014 was AUD 23.1 million (USD 20.9 million) and its 'nutrition-sensitive' funding was AUD 97.0 million (USD 87.6 million).<sup>59</sup> Total Australian spending, on both nutrition specific and nutrition sensitive interventions, was AUD 120.1 million (USD 108.5 million) in 2014, representing only 2.4 per cent of Australian ODA.<sup>60</sup>

5.41 By comparison, the *Global Nutrition Report 2015* notes that total ODA allocated to nutrition spending worldwide (nutrition specific plus nutrition sensitive) in 2013 was close to USD 5 billion, or four per cent of ODA.<sup>61</sup> Moreover, it estimates that total global donor spending will need to more

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57 See *Exhibit 29: DFAT, Innovation Exchange initiatives – Nutrition in Timor-Leste and Food for Nutrition Launch – LAUNCH*.

58 ODE, *A Window of Opportunity: Australian Aid and Child Undernutrition*, Canberra, April 2015, p. 6.

59 Based on figures provided by DFAT at the Sub-Committee's request, and also reported in: IFPRI, *Global Nutrition Report 2015*, Washington DC, 2015, p. 145.

60 Based on total Australian ODA figures for the 2013-14 and 2014-15 financial years, which stood at approximately AUD 5.0 billion (actual expenditure) for both years, as reported in: DFAT, *2015-16 Development Assistance Budget Summary: Mid-Year Economic and Fiscal Outlook Update*, Canberra, February 2016, p. [3]; and DFAT, *Australia's International Development Assistance: Statistical Summary 2013-14*, Canberra, February 2015, p. 3.

61 IFPRI, *Global Nutrition Report 2015*, Washington DC, 2015, p. 64.

than double by 2025 in order to meet the World Health Assembly's global nutrition targets.<sup>62</sup>

- 5.42 Based on these figures, the Sub-Committee's view is that Australian aid funding for nutrition should be significantly boosted, and with a focus on programs within the Indo-Pacific region. In its submission, RESULTS International (Australia) recommended that the Australian Government take the opportunity to announce an increase in Australia's funding for nutrition-specific interventions at the upcoming Nutrition for Growth Summit, to be held in Rio de Janeiro early in the second half of 2016. The Sub-Committee supports this recommendation. Australia's commitment to a stronger regional policy and ODA funding focus for both nutrition-specific and nutrition-sensitive activities would respond to the priority of need in the immediate region, while also highlighting this need to the international donor community.
- 5.43 The Sub-Committee also considers that some of this additional expenditure on nutrition related activities could and should be drawn from Australia's existing ODA resources. Globally, it is estimated that 30–40 per cent of government budgets are allocated to sectors that have a high degree of relevance to nutrition (that is, health, agriculture, education, social protection, water, sanitation and hygiene).<sup>63</sup> In Australia's case, combined funding for the 'Health', 'Education' and 'Agriculture, Fisheries and Water' priority areas under the aid program accounts for just over 40 per cent of total ODA.<sup>64</sup> As recommended by ODE, ensuring that more of Australia's existing and planned aid investments in these other sectors incorporate nutrition sensitive objectives would potentially have a significant impact on maximising nutrition outcomes. A good recent example is the TOMAK – Farming for Prosperity Program in Timor-Leste, which was launched earlier this year and represents DFAT's first agricultural development program to be designed with explicit nutrition objectives.<sup>65</sup>
- 5.44 The Sub-Committee considers that harnessing innovation to tackle nutrition issues also offers potential to make more effective use of existing aid resources. DFAT's recent work, through its innovationXchange, on piloting new ICT solutions to support nutrition objectives and its latest project, LAUNCH, which will explore innovations to address the Pacific's 'double

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62 IFPRI, *Global Nutrition Report 2015*, Washington DC, 2015, pp. 73–74.

63 IFPRI, *Global Nutrition Report 2015*, Washington DC, 2015, p. 67.

64 ODE, *A Window of Opportunity: Australian Aid and Child Undernutrition*, Canberra, April 2015, p. 5.

65 DFAT, *Submission 12*, p. 37.

burden', should be commended and further encouraged.<sup>66</sup> At the same time, recognising that ODA is only one slice in the overall development financing pie, priority attention should be given to supporting innovative nutrition-focused partnerships that leverage private sector investment and expertise.

- 5.45 Aside from the issue of committing the necessary resources to combat malnutrition, another major challenge is co-ordination. One key observation, from the Sub-Committee's perspective, is that nutrition is a policy orphan. At all levels – global, regional and national – no one entity has the sole lead on nutrition. For example, at the global level, a plethora of organisations, including the World Health Organization (WHO), the Food and Agriculture Organization (FAO), the United Nations Children's Emergency Fund (UNICEF), the World Food Programme (WFP) and the World Bank, manage particular aspects of the nutrition dimension. The Sub-Committee found that this situation is mirrored at the national level here in Australia, with various APS agencies, including DFAT, DoH, ACIAR, DAWR and CSIRO, each having a particular policy stake in the issue.
- 5.46 Similarly, with regard to the Indo-Pacific region, there are a number of major donors and multilateral organisations actively involved in addressing malnutrition issues. For example, the WHO and the World Bank have each developed their own regional strategies for tackling the 'double burden' challenge.<sup>67</sup> However, from the evidence, it is not clear to the Sub-Committee whether these and other key players active in the region are co-ordinating effectively, and whether their combined efforts and resources are not at risk of duplication.
- 5.47 In view of this, the Sub-Committee recommends that priority attention be given to significantly strengthening co-ordination mechanisms in relation to nutrition, both in Australia and in the region. In Australia, whole-of-government co-ordination could be improved by designating a central Australian government 'point of contact' for all of Australia's international engagement on nutrition (including through Australia's aid program), to be hosted by a lead department such as DFAT, DAWR or DoH.
- 5.48 As noted earlier in this chapter, the Sub-Committee also recommends a whole-of-government strategy be developed to guide all of Australia's international policy and program engagement on nutrition, including both nutrition-specific and cross-sectoral nutrition-sensitive investments under

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66 DFAT, *Exhibit 29: DFAT, Innovation Exchange initiatives – Nutrition in Timor-Leste and Food for Nutrition Launch-LAUNCH*.

67 World Bank Group, *Submission 20*, p. 10; and World Health Organization (WHO), *Action Plan to Reduce the Double Burden of Malnutrition in the Western Pacific Region (2015–2020)*, Geneva, 2015.

the Australian aid program. An overarching strategy of this kind would not only help improve interdepartmental co-ordination on nutrition, but also enhance policy coherence in our nutrition representation and messaging internationally.

- 5.49 Additionally, the Sub-Committee considers Australia should take a much stronger lead in co-ordinating an effective donor response to the specific challenge posed by the Pacific's double burden on health. It stands to reason that Australia should seek to assume this lead role. Australia is the largest aid donor in the Pacific by a wide margin.<sup>68</sup> It has longstanding and close historical, political and community ties with the region, which is also our closest market.<sup>69</sup> Given the high human and economic costs posed by this double burden trend, taking a strong regional lead on this issue aligns very much with Australia's national interest by contributing directly to sustainable economic growth and poverty reduction among our closest neighbours.
- 5.50 The Sub-Committee considers one practical early step Australia could take to help mobilise collective international action to address this problem in the region would be to lobby for Pacific Island representation in the Scaling Up Nutrition (SUN) Movement. While Asian countries are well represented in this global initiative, to date none of the Pacific Island countries have joined.<sup>70</sup> Given the benefits SUN Movement members receive, particularly in terms of a common policy and operating framework for scaling up country-level efforts to improve nutrition, Australia should advocate strongly for Pacific Island countries to join. Significantly, having Pacific Island members represented would help ensure the region's 'double burden' health challenge is put firmly on the SUN Movement's forward agenda and therefore draw increased international attention to the problem.
- 5.51 To support enhanced co-ordination, the Sub-Committee also recommends that Australia commission a major 'stocktake' of nutrition interventions that are currently being pursued by lead aid donors and multilateral organisations in the Pacific. This regional stocktake would aim to assess how donor co-ordination and collaboration on nutrition issues could be improved and expanded, including through identifying key synergies and, conversely, the main areas of ODA resource overlap. It would also identify

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68 J Hayward-Jones, 'Australia's Pacific Aid Budget Spared from Serious Cuts' <[lowyinterpreter.org/post/2015/05/13/Australia-aid-budget-Pacific-spared-serious-cuts.aspx](http://lowyinterpreter.org/post/2015/05/13/Australia-aid-budget-Pacific-spared-serious-cuts.aspx)> *The Interpreter*, Lowy Institute, 18 May 2015, viewed 6 April 2016.

69 DFAT, 'Pacific Islands Regional Organisations', <[dfat.gov.au/international-relations/regional-architecture/pacific-islands/pages/pacific-islands-regional-organisation.aspx](http://dfat.gov.au/international-relations/regional-architecture/pacific-islands/pages/pacific-islands-regional-organisation.aspx)> viewed 6 April 2016.

70 SUN Movement, 'SUN Countries', <[scalingupnutrition.org/sun-countries](http://scalingupnutrition.org/sun-countries)> viewed 11 April 2016.

major gaps in donors' programming and areas requiring priority attention, with a view to feeding into future nutrition policymaking and aid investment decisions. To secure wider buy-in, the stocktake could be jointly commissioned with other key players such as the WHO, FAO, World Bank and USAID. An appropriately qualified international research body (such as the International Food Policy Research Institute) could be engaged to conduct the stocktake. However, pursuing this proposal would not preclude Australia and other donors taking more immediate steps in the interim to address donor co-ordination issues in the region.

- 5.52 An Australian-led, co-ordinated regional response to the 'double burden' in the Pacific should also focus on strengthening the evidence base to inform future policymaking. The Sub-Committee's work in preparing this report has highlighted the dearth of reliable and timely data on relevant nutrition indicators in the region. Innovations such as the Data for Health partnership between the Australian government and Bloomberg Philanthropies could help in this regard.<sup>71</sup> Efforts to strengthen nutrition data collection and analytical capacity among developing countries in the region, as well as to encourage and support researchers across a range of disciplines to focus more on regional nutrition issues, should also be considered.
- 5.53 Finally, given the importance of nutrition and the potential for the double burden of malnutrition to severely inhibit economic and social development, and indeed to reverse gains made over recent decades, the Sub-Committee urges that the Minister for Foreign Affairs and the Minister for International Development and the Pacific make these issues a high priority in Australia's bilateral and regional dialogues, especially with Pacific Island countries, and the Pacific Island Forum. Only with substantial high level political commitment will these issues receive the attention they urgently require.

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71 DFAT innovationXchange, 'Better Data for Health Partnership' <innovationxchange.dfat.gov.au/project/better-data-health-partnership> viewed 11 April 2016.

## Recommendations

### Recommendation 1

The Committee recommends that the Australian Government:

- develop a stronger regional policy and funding focus under Australia's Official Development Assistance program on both nutrition-specific and nutrition-sensitive activities; and
- consider announcing Australia's new Indo-Pacific nutrition policy and funding focus at the forthcoming Nutrition for Growth Summit, to be held in Rio de Janeiro in the second half of 2016.

### Recommendation 2

The Committee recommends that the Australian Government:

- continue to support and scale up aid innovations aimed at improving nutrition outcomes, including through the Department of Foreign Affairs and Trade's innovationXchange;
- give priority support to innovative aid partnerships and approaches that leverage private sector finance and expertise in support of improved nutrition outcomes; and
- focus the above efforts, in particular, on finding solutions that help address the 'double burden' of malnutrition and obesity in the Pacific region.

### Recommendation 3

The Committee recommends that the Australian Government commit to strengthening existing whole-of-government co-ordination on nutrition, including through:

- designating a central Australian Government 'DFAT point of contact' for all of Australia's international engagement on nutrition (including through Australia's aid program); and
- developing an intersectional strategy (e.g. engaging education, agriculture, health, women's empowerment, climate change, and credit support) to guide all of Australia's international policy and program engagement on nutrition, including both

**nutrition-specific and nutrition-sensitive investments under the Australian aid program.**

#### **Recommendation 4**

**The Committee recommends that the Australian Government consider taking a leadership role in co-ordinating an effective donor response to the specific challenge posed by the health ‘double burden’ in the Pacific region, including through:**

- **developing strategies to combat malnutrition – both undernutrition and overnutrition – a high priority for the Minister for Foreign Affairs and the Minister for International Development and the Pacific, in particular through regional fora such as the Pacific Islands Forum;**
- **lobbying strongly for Pacific Island countries to join the Scaling Up Nutrition Movement, to help ensure that the region’s ‘double burden’ becomes a priority in its forward agenda;**
- **commissioning a major ‘stocktake’ of nutrition interventions that are currently being pursued by lead aid donors and relevant international organisations in the Pacific region, with a view to assessing how future co-ordination and collaboration on nutrition issues between these key players could be improved and expanded;**
- **supporting innovative and effective public health education campaigns in Pacific Island countries including creative engagement of local media, to promote healthy dietary choices; and**
- **strengthening the evidence base to inform future policymaking by:**
  - ⇒ **driving regional efforts to improve the availability and use of reliable and timely data on relevant nutrition indicators;**
  - ⇒ **working to strengthen nutrition data collection and analytical capacity among partner countries in the region; and**
  - ⇒ **encouraging and supporting researchers across a range of disciplines to focus more on nutrition issues in the Pacific region.**

The Hon Dr Sharman Stone MP  
Chair  
Foreign Affairs and Aid Sub-Committee  
4 May 2016

The Hon Teresa Gambaro MP  
Chair  
Joint Standing Committee on Foreign  
Affairs, Defence and Trade  
4 May 2016



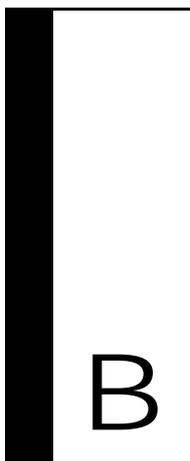
## Appendix A—Submissions list

1. ChildFund Australia
2. Olam International
3. YES BANK Ltd
4. The Copenhagen Consensus
5. RESULTS International (Australia)
- 5.1 RESULTS International (Australia) – Supplementary Submission
6. AgResults Program
7. Office of the Chief Trade Adviser- Pacific Island Forum (OCTA)
8. Agricultural Research Council
9. Department of Health–Australian Government
10. CARE Australia
11. Africa–International Livestock Research Institute (BeCA-ILRI) Hub
12. Department of Foreign Affairs and Trade (DFAT)
- 12.1 DFAT – Supplementary Submission
13. Nepal Agricultural Research Council (NARC)
14. Business for Development
15. Syngenta Foundation
16. Committee on World Food Security
17. Fairtrade Australia and New Zealand Ltd
18. Commonwealth Scientific and Industrial Research Organisation (CSIRO)
19. AVRDC - The World Vegetable Center
20. World Bank Group
21. GrainGrowers
22. World Vision Australia
23. Institute of Policy and Strategy for Agriculture and Rural Development (IPSARD)
24. Sub-Institute of Agricultural Engineering and Post-Harvest Technology (SIAEP)

25. Northern Mountainous Agriculture and Forestry Science Institute (NOMAFSI)
26. Australia Papua New Guinea Business Council
27. Philippine Council for Agriculture, Aquatic and natural Resources Research and Development (PCAARRD)
28. ActionAid Australia
29. New Zealand Ministry of Foreign Affairs and Trade
30. Ministry of Foreign Affairs, the Netherlands
31. National Farmers' Federation
32. Australian Food and Grocery Council
33. Department of Agriculture and Water Resources (DAWR)
- 33.1 DAWR – Supplementary Submission
34. Australian Centre for International Agriculture Research (ACIAR)
- 34.1 ACIAR – Supplementary Submission
35. Dr Kuntala Lahiri-Dutt
36. Rt Hon Desmond Swayne TD MP, Department for International Development, United Kingdom
37. CropLife Australia
38. Foreign Affairs, Trade and Development, Canada
39. International Rice Research Institute (IRRI)
40. Landcare Foundation of the Philippines Inc.
41. Caritas Australia
42. Palladium
43. Oxfam Australia
44. Hue University of Agriculture and Forestry, Vietnam
45. WWF Australia
46. The University of Sydney
- 46.1 The University of Sydney – Supplementary Submission
- 46.2 The University of Sydney – Supplementary Submission
47. Robert Oliver Enterprises
48. Dr Raghendra Jha
49. The Crawford Fund
50. Business Council of Co-operatives and Mutuals
- 50.1 Business Council of Co-operatives and Mutuals – Supplementary Submission

51. Connexion
52. Regional Director Asia and Pacific, International Co-operative Alliance (ICA)
53. Australian Institute of Marine Science





## Appendix B—Exhibits list

1. Ministry of Foreign Affairs, The Netherlands  
*Zero Hunger, Zero Malnutrition – New Inroads towards Food and Nutrition Security, September 2013*
2. Ministry of Foreign Affairs  
*Public Private Partnership – The Dutch Diamond Approach [nd]*
3. Caritas Australia  
*Care, Caritas Australia, CBM. Oxfam Australia, Plan International. Save the Children, World Vision, Sustainable and Inclusive Economic Development, A Key Role for Australian Non-Government Organisations [nd]*
4. University of Sydney  
*'Research and Innovation in Agriculture and Food Security', Crawford Fund Annual Parliamentary Conference 2015, Canberra 10-12 August 2015*
5. University of Sydney  
*R Alders, J Adongo Awuni, B Bagnol, P Farrell, and N de Hann, 'Impact of Avian Influenza on Village Poultry Production Globally', Review, EcoHealth, 18 October 2013*
6. University of Sydney  
*J de Bruyn, J Wong, B Bagnol, B Pengelly and R Alders, 'Family Poultry and Food and Nutrition Security', CAB Reviews 2015, 10, no.013*
7. University of Sydney  
*K Dewey and K Begun, 'Why Stunting Matters', Alice and Thrive: Insight A&T Technical Brief, Issue 2, September 2010*
8. University of Sydney  
*M Springmann, D Mason-D'Croze, S Robinson, T Garnett, H C J Godfray, D Gollin, M Raynor, P Ballon, P Scarborough, 'Global and Regional Health Effects of Future Food Production under Climate Change', The Lancet, 2 March 2016*

9. University of Sydney  
*The Most Recent Indo-Pacific nations <[under]5 Child[] Nutritional Status Data, compiled by Professor M Li*
10. University of Sydney  
*R Alders, 'Feeding the World: Addressing Gender Divides Could Help Reduce Malnutrition', The Conversation, 25 September 2013*
11. University of Sydney  
*'Discovering the Links between Village Poultry Health and Human Nutrition in Timor-Leste', Scholarship, funded by AusAid and Sydney University, August 2015*
12. University of Sydney  
*G Braidotti, 'The Women Who Broke the Poultry Disease Cycle in Africa', Animal Health, Partners Issue One, 2016*
13. University of Sydney  
*R G Alders, 'Peak Food and Our Quest for an Ethical and Ecologically Sustainable Human Diet', Proceedings of the Australian Poultry Science Symposium, Sydney, Australia, Volume 27, pp. 9-13*
14. University of Sydney  
*J De Bruyn, 'Healthy Chickens, Health Children: Sustainable Contributions to Infant Nutrition through the Control of Newcastle Disease in Village Poultry', Tanzania, funded by Australian International Food Security Research Centre (AIFSRC), ACIAR*
15. University of Sydney  
*R Alders, A Aongolo, B Bagnol, J de Bruyn, Skimbok R Kocj, M Li et al, Using a One Health Approach to Promote Food and Nutrition Security in Tanzania and Zambia' GRF Davos Planet@Risk, Vol. 2, No 3, Special Issue on the One Health (Part 1/11), April, 2014, pp.187-90*
16. University of Sydney  
*R Alders, B Bagnol, R Costa, P Farrell, M Li, R McConchie, H Msami, 'Unlocking the Potential of Village Chicken production to Contribute to Household Nutritional Security', Voices of Change GFAR [The Global Forum on Agricultural Research]*
17. University of Sydney  
*R Alders, 'Why Mixed Family Farming is Crucial', BLOG Sydney Environment Institute, 2 December 2014 (excerpt)*
18. University of Sydney  
*A Mann, BLOG, 'Small is Beautiful in Food Systems Where People Matter', BLOG Sydney Environment Institute, 24 March 2015*
19. Australian Centre for International Agricultural Research  
*ACIAR 2015-16 Annual Operational Plan, July 2015*
20. Australian Centre for International Agricultural Research  
*Partners in Research for Development, Issue One 2016-Empowering Women, Changing Lives*

21. Department of Foreign Affairs and Trade  
*Nutrition in Australia's Aid Program Operational Guidance Note, December 2015*
22. Department of Foreign Affairs and Trade  
*Nutrition and Health in Australia's aid program. Operational Guidance Note, December 2015*
23. Department of Foreign Affairs and Trade  
*Getting the Foundations Right: Early Childhood Development and Australia's Aid Program – Investment Guidance Note, September 2015*
24. Department of Foreign Affairs and Trade  
*DFAT Update on Implementation of Recommendations from the ODE Report -April 2015/16*
25. Department of Foreign Affairs and Trade  
*Australian Nutrition Specific ODA 2014–15*
26. Department of Foreign Affairs and Trade  
*Additional Information Nutrition ODA – DFAT, 1 April 2016*
27. Department of Foreign Affairs and Trade  
*DFAT, Nutrition-Sensitive Agriculture, Operational Guidance Note, August 2015*
28. Department of Foreign Affairs and Trade  
*DFAT, Guidance Note: Social Protection and Nutrition, April 2015*
29. Department of Foreign Affairs and Trade  
*Innovation Exchange initiatives: Nutrition in Timor-Leste and Food for Nutrition – LAUNCH*
30. International Co-operative Alliance  
*ICA, Annual Report 2014, Poster*
31. International Co-operative Alliance  
*World Cooperative Monitor, Exploring the Co-operative Economy Report 2015*
32. International Co-operative Alliance  
*Resilience UK, Flyer*
33. International Co-operative Alliance  
*ILO, Resilience in a Downturn: the Power of Financial Co-operatives, 2013*





## Appendix C—Witnesses at public hearings

Canberra, Thursday, 4 February 2016

### Australian Agricultural and Resource Economics Society (AARES) Participants

Dr Nicholas Austin, Chief Executive officer, Australian Centre for International Agricultural Research

Mr David Shearer, General Manager, Corporate, Australian Centre for International Agricultural Research

Professor Jikun Huang, Director, Center for Chinese Agricultural Policy, Chinese Academy of Sciences

Professor Raghbendra Jha, Private capacity

Professor Rina Oktaviani, Director, International Trade Analysis and Policy Studies, Bogor Agriculture University

Professor Philip Pardey, Professor and Director of Global Research Strategy, University of Minnesota

Professor Wendy Umberger, University of Adelaide

Canberra, Monday, 22 February 2016

### Australian Centre for International Agricultural Research (ACIAR)

Dr Nicholas Austin, Chief Executive Officer

Mr David Shearer, General Manager, Corporate

Dr Peter Horne, General Manager, Country Programs

### Department of Foreign Affairs and Trade (DFAT)

Mr Justin Brown, Acting Deputy Secretary

Ms Gita Kamath, Assistant Secretary, Agriculture and Food Branch, Office of Trade Negotiations

Mr Marcus Howard, Acting Assistant Secretary, Health and Water Branch,  
Development Policy Division

Dr Julie Delforce, Senior Sector Specialist, Agricultural Development and Food  
Security, Agriculture and Food Branch, Office of Trade Negotiations

Dr Tristan Armstrong, Sector Specialist, Agricultural Productivity and Food  
Security Section, Agriculture and Food Branch, Office of Trade Negotiations

Ms Chakriya Bowman, Director, Pacific Economic Growth Section, Pacific  
Regional Branch, Pacific Division

**Canberra, Monday, 29 February 2016**

**Commonwealth Scientific and Industrial Research Organisation (CSIRO)**

Dr Andrew Hall, Research Group Leader, Agriculture

Dr Daniel Walker, Research Director, Agriculture

**Department of Agriculture and Water Resources (DAWR)**

Ms Jo Evans, Deputy Secretary

Ms Elizabeth Bie, Assistant Secretary, Bilateral Engagement and International  
Co-operation Branch

Dr Robyn Martin, Assistant Secretary, Animal Health Policy Branch

Dr Chris Parker, Assistant Secretary, Plant Export Operations Branch

**Canberra, Thursday, 3 March 2016**

**International Co-operative Alliance (ICA)**

Dr Sifa Chiyoge, Regional Director, Africa

Mr Rodrigo Gouveia, Director of Policy

Mr Martin Lowery, Board Member, USA representative

Ms Melina Morrison, Business Council of Co-operative and Mutuals

Mr Martin Well, International Development Project Director

**Mission on Health Care and Development (MHCD)**

The Hon Dr Luc Mulimbalimba-Masururu, Medical Director

**Sydney, Friday, 11 March 2016**

**ActionAid Australia**

Dr Sally Henderson, Senior Program and Policy Co-ordinator

Ms Grace Nicholas, Program Quality Coordinator

**Business Council of Co-operatives and Mutuals (BCCM)**

Ms Melina Morrison, Chief Executive Officer

**Business for Development**

Mr David Campbell, Chief Operating Officer

Mr David Faulmann, General Manager, Advocacy

**Caritas Australia**

Ms Jamieson Davies, Head of International Programs

Ms Lisa McMurray, Design, Monitoring, Evaluation and Learning Co-ordinator

**ChildFund Australia**

Mr Richard Geeves, Senior Education Adviser

Ms Manasi Kogekar, Program Development Officer

**Oxfam**

Ms Kelly Dent, Acting Head, Public Policy and Advocacy Unit

Ms Shona Hawkes, Economic Justice Advocacy Co-ordinator

**Rabobank Australia Group**

Mr Marc Oostdijk, Head of Sustainable Business Development

**The University of Sydney**

Associate Professor Robyn Alders AO, Principal Research Fellow

Professor David Guest, Professor of Plant Pathology

Professor Mu Li, Professor in International Public Health

Professor Robert Park, Judith and David Coffey Chair in Sustainable Agriculture

Mr Thomas Some, Head, International Agencies and Governments Program,  
Office of Global Engagement

**Canberra, Tuesday, 15 March 2016**

**ACIAR**

Dr Nicholas Austin, Chief Executive Officer

Mr David Shearer, General Manager, Corporate

**John Dillon Fellows (JDFs)**

Professor Aung Aung, University of Veterinary Science

Dr Martin Golman, Acting Director, Papua New Guinea Forest Research Institute

Dr Nurul Hilmiati, Researcher, Indonesian Agency for Agricultural Research and Development

Dr Nyo Me Htwe, Postdoctoral Fellow, International Rice Research Institute

Dr Aamer Irshad, Chief, Food and Agriculture, Ministry of Planning, Development and Reform, Government of Pakistan

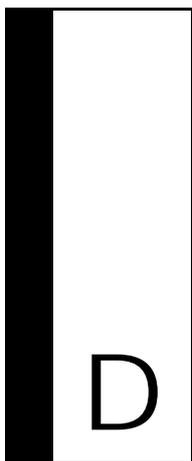
Dr Sathya Khay, Head of Plant Protection Division, Cambodian Agricultural Research and Development Institute

Dr Ngoc Quyen Luu, Deputy Director, Northern Mountainous Agriculture and Forestry Science Institute

Dr Thandar Nyi, Staff Officer, Department of Agriculture, Ministry of Agriculture and Irrigation

Dr Minh Tien Tran, Deputy Director-General, Soils and Fertilizers Research Institute

Mrs Luanah Yaman, Manager, Sedentary Fisheries, National Fisheries Authority

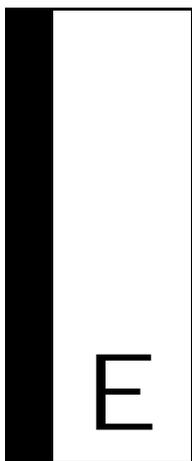


## Appendix D—Answers to questions on notice

1. Mr Rodrigo Gouveia, Director of Policy, International Co-operative Alliance – Answers to Questions on Notice, taken at the public hearing in Canberra on 3 March 2016, via teleconference.

*Please note, a number of questions on notice were authorised as supplementary submissions to this inquiry.*





## Appendix E—Australia’s agriculture development partners

DFAT lists Australia’s agriculture development partners<sup>1</sup> as:

- **Partner governments** – in consultation and capacity building with regional ministries of agriculture, governments and multilaterals such as the World Bank Group. Key partners for bilateral engagement include OECD members, principally, Canada, Germany, New Zealand, the Netherlands, the United Kingdom and the United States.
- **Australian government and research bodies** – with key research agencies the Australian Centre for International Agricultural Research Centre (ACIAR) and the Commonwealth Scientific and Industrial Research Organisation (CSIRO), research partners such as the Sydney and Wollongong universities, and shared initiatives with the Department of Agricultural and Water.
- **Multilateral organisations** – major multi-country partnerships are managed through the United Nations, with other initiatives advanced through the Cairns Group of the World Trade Organisation (WTO), engagement with G20 work streams and through the World Bank and international finance corporation.
- **Regional organisations** – participating in fisheries and agricultural fora through the Asia Pacific Economic Co-operation (APEC), the Association of Southeast Asian Nations (ASEAN), the Indian Ocean Rim Association (IORA) and a range of Pacific Islands fisheries bodies, and in support of the Pacific Islands Forum (PIF)’s broader economic development agenda.
- **Other donors and global networks** – through bilateral engagements with aid agency counterparts, most notably Canada, Germany, New

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1 Drawn from DFAT, *Submission 12*, pp. 10–12.

Zealand, the Netherlands, the United Kingdom (UK) and the United States (US), and largely through cooperative multilateral initiatives.

- ***Business and industry bodies*** – through the World Economic Forum (WEF), both as funding leader of the Grow Asia initiative and through Transformation Leaders Network, and in forms of collaboration with multinationals Syngenta Asia-Pacific, Olam International, Nestle, Bayer CropScience, Unilever and Rabobank, and with consulting and implementing organisations, including Palladium, Cardno, Adam Smith International and Carana Corporation.
- ***Civil society*** – DFAT funds many non-government organisations (NGOs) through the Australian NGO Co-operation Program (ANCP), with the main partners in the agriculture and fisheries sectors including Oxfam Australia, World Vision Australia, World Wide Fund for Nature (WWF) Australia, Fairtrade Australia and New Zealand, CARE Australia, Save the Children, ActionAid, Worldfish, the Nature Conservancy and Rare.<sup>2</sup>

DFAT also conducts multilateral engagement under a range of other international multilateral partnership agreements on agriculture, food security and fisheries issues, including:

- **Scaling-Up Nutrition (SUN) Movement** – SUN encompasses over 2 000 organisations, including governments, civil society, the UN, donors (including Australia), businesses and researchers.<sup>3</sup>
- **Global Alliance for Improved Nutrition (GAIN)** – Under GAIN, the Amsterdam Initiative against Malnutrition (AIM) works at multiple levels of value chains to make nutritious foods more accessible to poor consumers.<sup>4</sup>
- **The Global Agriculture and Food Security Program (GAFSP)** – as founding member Australia has also contributed significantly to the public and private sector widows of the World Bank managed GAFSP.<sup>5</sup> DFAT advises that 13 per cent of GAFSPs' nearly one billion dollar Public Sector portfolio is targeted towards nutrition-related activities.<sup>6</sup>

2 DFAT, *Submission 12*, pp. 10–12.

3 DFAT, *Submission 12*, p. 35.

4 DFAT, *Submission 12*, p. 35.

5 World Bank Group, *Submission 20*, p. 10.

6 Two-thirds of GAFSP's commitments are spent on nutrition-sensitive agriculture activities and the rest on related communication campaigns and efforts to improve home conditions. See DFAT, *Submission 12*, p. 38.

Additionally, Australia supports AgResults, an initiative agreed at the 2010 G20 Summit in Toronto by Australia and other leaders of the G20.

- AgResults – focusses on harnessing private sector innovations in food security and improving productivity in developing countries. Following the summit, the governments of Australia, Canada, the United States, and the United Kingdom, along with the Bill and Melinda Gates Foundation, committed AUD \$162.5 million to formally establish AgResults. The Government of Australia pledged an AUD \$20.2 million contribution to the initiative.<sup>7</sup>

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<sup>7</sup> AgResults Program , *Submission 6*, p. 1.

