Community Food and Health

Scoping review protocol

Health and other impacts of community food production in Small Island States: a scoping review

Background

The Community Food and Health (CFaH) project aims to develop theory and methods for evaluating the impact of community based food production initiatives on the risk of non-communicable diseases (NCDs), social and economic wellbeing and the environment. The initial focus of the project is on initiatives in St Vincent & the Grenadines and Fiji with aim of using the methods developed in other Small Island Developing States (SIDS). Objective 1 of the CFaH project is to undertake a review of relevant published and grey literature.

'Reviews' come in many shapes and sizes, with different approaches being appropriate to different review questions, available resources and what the answers to the review questions are intended to inform[1]. Irrespective of the approach taken, core to all them ought to be that they are clearly defined and described, systematically undertaken, and that the results are largely replicable by others following the same methodology.

Review aim and objectives

The research aim is:

- To identify studies that report the health, social, economic and environmental impacts of CFPIs in SIDS, and explore what is known about those CFPIs including their number, distribution and characteristics.

Core objectives that need to be achieved through answering this question by September 2017 are:

A. To document and critically review the study designs and data collection methods (including data collection tools) used previously to investigate the health, social, economic and environmental impacts of CFPIs.
B. To construct a typology, based on current descriptions, of community-based food production initiatives
C. To identify, compare and contrast theoretical causal frameworks for the health, social, economic and environmental impacts of CFPIs

Methods

1. Type of review

Given that the overarching review question is broad and will require identifying literature from a range of disciplines, a scoping review will be undertaken. Scoping reviews have been defined as, ‘a form of knowledge synthesis, which incorporate a range of study designs to comprehensively summarize and synthesize evidence with the aim of informing practice, programs, and policy and providing direction to future research priorities’[2]. While current guidance for undertaking and reporting scoping reviews is less well developed than for systematic reviews of interventions, recent work is aiming at the standardization of definitions and methods [2-6].

The approach taken here follows the guidance developed jointly by Arskey [2] and Colquhoun[5]. At the time of writing, these authors are also part of the group developing PRISMA (Preferred Reporting Items for Systematic reviews and Meta-Analyses) guidance on the reporting of scoping reviews[7].

There are three major differences between the conduct of a scoping review and a systematic review. The first is that the process for a scoping review is explicitly iterative, and, for example, both the search strategy and the criteria for study selection may change after the review is started, enabling the reviewers to hone their approaches based on new familiarity with the literature. Of course, any changes that are made after the scoping review process is started must be documented, and the final protocol should reflect what was actually done and why.

The second difference is that scoping reviews typically do not attempt to formally assess the quality or risk of bias of the studies identified. The outputs from scoping reviews provide a synthesis of the range, types of studies and their reported findings that address the scoping review question. Further work, guided by the findings of the scoping review and typically focussed on one or more aspects of it, can then be undertaken to reach a judgement on the quality and robustness of the evidence. Related to this is the third difference, which is that meta-analyses are rarely an appropriate way to summarise the findings from scoping reviews.

Six stages in the scoping review process are summarised in the table, and each of these are considered in turn.

Table 1: Stages in a scoping review. Source: references 2&5

Stage	**Description**
1. Identifying the research question	Clearly defined but broad, in conjunction with purpose of conducting scoping review; stipulate outputs
2. Identifying relevant studies/sources:	Databases, reference lists, hand searches; time span, languages. Breadth and comprehensiveness is important.
3. Study selection	Study selection not linear – iterative (searching literature, refining search strategy, reviewing articles for inclusion); post-hoc inclusion and exclusion criteria – based on specifics of research question and on new familiarity with the subject matter through reading the studies
4. Charting the data	Data charting form for extracting data form each study In team agree on variables to extract; piloting charting form
5. Collating, summarising and reporting results	Analysis: qualitative content analysis and descriptive numerical summary (nature and extent of studies); thematic construction or framework to provide overview of the breadth of literature; clarity and consistency in reporting;
6. Consultation	Optional stakeholder involvement

2. Definitions

The focus of the research question is on community based food production initiatives (CFPIs) and on their health, social, economic and environmental impacts.

It is emphasised that the primary focus of the review is on initiatives concerned with ‘local’ food production (with definitions of ‘local’ addressed below). Other types of interventions, such as those related to aspects of the food supply chain, will be reviewed as and when they have been studied within the context of local food production.

For the purpose of this review we define CFPIs as: food production initiatives that are owned, organised and managed locally; and produce either fresh or minimally processed food for local consumption. The following definitions will be employed:

A. ‘Food produced for local consumption’: food that is produced for consumption within that country.
B. ‘Fresh or minimally processed food’: the definition and description proposed by NOVA will be used. This is summarised in Table 2.
C. Initiatives that are ‘locally owned and managed’: The initial pragmatic approach will be to record the information given (if any) on ownership, organisation and management of the initiative (e.g. ‘smallholders’ as ‘producers who occasionally sell products for cash as a supplement to other sources of income; to those who regularly market a surplus after their consumption needs have been met; ‘small-scale commercial farmers’, with a primary focus on production for the market’; ‘family farm’, which is sometimes used interchangeably with ‘small holder’, but again there definitions are not consistent, although many require that the family provides the majority of labour.

Table 2: Unprocessed and Minimally Processed Foods Source: references 8,9

Description	Examples
Foods of plant (leaves, stems, roots, tubers, fruits, nuts, seeds) or animal origin (meat, other flesh, tissues and organs, eggs, milk) that are processed shortly after harvesting, gathering, slaughter, or husbanding; minimally processed foods are non-processed foods altered in manners that do not add or introduce any substance but may involve subtracting parts of the food; minimal processes include cleaning, scrubbing, washing, winnowing, hulling, peeling, grinding, grating, squeezing, flaking, skinning, boning, carving, portioning, scaling, filleting, pressing, drying, skimming, pasteurization, sterilizing, chilling, refrigerating, freezing, sealing, bottling (as such), simple wrapping, and vacuum and gas packing; malting, which adds water, is a minimal process similar to fermenting that	Fresh, chilled, frozen, vacuum-packed vegetables and fruits; grains (cereals), including all types of rice; fresh, frozen, and dried beans and other legumes (pulses), roots, and tubers; fungi; dried fruits and freshly prepared or pasteurized non-reconstituted fruit juices; unsalted nuts and seeds; fresh, dried, chilled, and frozen meats, poultry, fish, and seafood; dried, fresh, pasteurized full-fat, low-fat, skimmed milk, and fermented milk such as plain yogurt; eggs; flour; “raw” pastas made from flour and water; teas, coffee, herbal infusions; tap, filtered,spring, mineral water

adds living organisms as long as it does not generate alcohol	

3. Identifying relevant studies and sources

Geographical scope

The initial geographical scope will be limited to Small Island Developing States (SIDS) and SADCs. However, the geographical scope was narrowed during title/abstract screening to exclude SADC, as the review was focused to SIDS only. The SIDS that are included are taken from those listed by the United Nations Division for Sustainable Development[12]. These include 37 independent countries and 20 overseas territories / departments. We also added the Caribbean Region and Melanesia as Mesh terms, and Tukelau as an additional country following the advice of our South Pacific partner.

Time frame

Studies published from January 1997 to end of December 2016 are eligible. The choice of this 20 year time frame is pragmatic, and will be reviewed once findings from the initial literature searches have been assessed.

Languages

No language restrictions will be applied, although note that the search terms are in English and most of the databases that will be searched are primarily in English.

Data bases

The following data bases will be searched. This list is intended to cover the major sources for health, social, economic, environmental and agricultural sciences. The list is partially informed by the systematic review protocol of Durao et al[14] on food security in low and middle income countries.

- Health related databases:
    - MEDLINE (via PubMed); EMBASE; CINAHL
- Social science (including economics) related databases
    - Web of science for: Conference Proceedings Citation Index, Science Citation Index Expanded, and Social Science Citation Index; SCOPUS; ASSIA (Applied Social Sciences Index and Abstracts); Econlit;
- Agricultural science, including agricultural economics, related databases
    - AGRICOLA (US National Agriculture Library); AGRIS (hosted by FAO);

- Cross disciplinary data bases
    - WPRIM (Western Pacific Region Index Medicus); and LILACS.

Initial search strategy

The initial search strategy will aim to identify studies concerning CFPIs, including aquaculture, fishing and fish farming in SIDS.

This search will then be limited by geographical scope and 20-year timeframe. An example of the full search strategy written for Pubmed is given in the appendix A.

Evaluating and refining the search strategy

The initial search strategy described above is deliberately broad and simple, aiming to maximise sensitivity (i.e. the identification potentially relevant literature about CPFIs).

This search strategy requires further evaluation and, if necessary, refinement. Evaluation will include:

1. Applying the same strategy in all the databases listed above. It may be that this approach identifies an unmanageably large number of citations for manual review, in which case further restrictions will be required.
2. Determining whether the strategy picks up relevant studies. This will be tested by asking members of the study team, from health, agricultural, economic and environmental science backgrounds to indicate relevant studies / literature that they are aware of, and determining whether or not these are picked up by the search strategy.

4. Study selection & charting the data

Citations identified by the search will be downloaded into an online bibliographic database (Rayyan) and the title and abstracts screened independently for inclusion by two individuals (EH, CB). Reports which meet the following inclusion criteria will be taken forward for full-text screen: the document reports some aspect of food production within the geographical setting of interest; food production is owned or managed locally (or is likely to be); the food production does not predominantly concern products for export. The classifications will be compared and disagreements resolved by discussion. If unsure or there is insufficient information to classify then an inclusive approach will be taken and the citation will be classified as include.

The data abstraction form will be developed in REDCap, a secure online data collection platform [16] and will be accessible to all reviewers. The form will be pilot tested independently by four individuals on ten documents considered to be *eligible for inclusion.* Following the pilot test the tool will be reviewed and modified accordingly. Brief data abstraction will be undertaken for all reports that reach the full text screen. Each report will be issued a Study ID and basic study characteristics will be charted (first author, title and year of publication). Full texts will be re-assessed against the inclusion criteria (above), and those which describe primary or secondary research on the impact of community food production initiative(s) on one or more of the following outcomes: social wellbeing, economics, health/nutrition, environment will be considered eligible. Eligible reports will undergo full data abstraction by four reviewers (CB, EH, CG, NU) and 10% of reports will be double abstracted (CV). The online data abstraction form will be developed and available to reviewers via Redcap.

Data abstracted will include: 1. Publication type. 2. Methodology. 3. Study aim and design. 4. Full description of CFPI. 5. Setting and population. 6. Type and description of impacts/outcomes reported. 7. Methods used to assess primary and secondary outcomes. 8. Instruments, tools and/or models used to assess primary and secondary impacts. 10. Issues, research questions and/or methodological approaches not considered by the review but may be relevant. 11. Comments.

As part of the iterative process, studies which report research of impacts *on* food production or *on* food production programs/interventions were identified as important. These reports will be labelled during the full text screen and data abstracted in a secondary phase of data collection. Given that these studies do not directly address the primary objectives of the scoping review, a pragmatic approach will be taken and a shortened version of the data abstraction form will be applied.

5. Outcomes

Primary outcomes: Any health, social, environmental or economic impact will be considered. The primary outcomes of interest will be the health impacts of CFPIs

Secondary outcomes: Study designs and data collection methods (including data collection tools) used to investigate impacts of CFPIs; current descriptions of CFPIs; theoretical causal frameworks for impacts of CFPIs.

6. Risk of bias

In line with the scoping review method, there will be no formal assessment of study quality or risk of bias of the included studies [5].

7. Collating, summarising and reporting the results

Initially a PRISMA flow chart will be developed to summarise literature identification and study selection.

A narrative (descriptive) synthesis of the findings is planned, owing to the breadth of the scoping review and likely heterogeneity amongst the impacts reported by eligible studies. Furthermore, a descriptive numerical summary (nature and extent of studies), thematic construction or framework to provide overview of the breadth of literature, and a summary of the clarity and consistency in reporting is planned. The report of the findings will be shaped by the three objectives of the review.

There is no plan to analysed specific subgroups, however the iterative approach will allow for subgroup analyses based on specifics of research question and on new familiarity with the subject matter through reading the studies.

Finally, gap maps will summarise the domains in which evidence is available and in which it is missing [15].

8. Consultation

Consultation on the findings from the review will take place at the project workshop in September 2017, at which the ongoing review findings will be used to help inform the detailed planning of the next stages of the review and wider CFaH project.

Additionally, partners will be consulted monthly to provide opportunity to inform each phase of the review.

9. Dissemination

Results will be reported in line with PRISMA guidance (Preferred Reporting Items for Systematic reviews and Meta-Analyses) including, if available by then, specific guidance for scoping reviews that is currently in preparation (http://www.prisma-statement.org/Extensions/InDevelopment.aspx). The findings will be disseminated via peer reviewed publication, national and international conferences.

10. Key words

Scoping review; Small island developing states; Community food production; Health; Nutrition; Non-communicable diseases

References

1. Grant MJ, Booth A: **A typology of reviews: an analysis of 14 review types and associated methodologies**. *Health Info Libr J* 2009, **26**(2):91-108.
2. Arksey H, O'Malley L: **Scoping studies: towards a methodological framework**. *Int J Soc Res Methodol* 2005, **8**(1):19-32.
3. Tricco AC, Lillie E, Zarin W, O'Brien K, Colquhoun H, Kastner M, Levac D, Ng C, Sharpe JP, Wilson K *et al*: **A scoping review on the conduct and reporting of scoping reviews**. *BMC Med Res Methodol* 2016, **16**:15.
4. Peters MD, Godfrey CM, Khalil H, McInerney P, Parker D, Soares CB: **Guidance for conducting systematic scoping reviews**. *International journal of evidence-based healthcare* 2015, **13**(3):141-146.
5. Colquhoun HL, Levac D, O'Brien KK, Straus S, Tricco AC, Perrier L, Kastner M, Moher D: **Scoping reviews: time for clarity in definition, methods, and reporting**. *J Clin Epidemiol* 2014, **67**(12):1291-1294.
6. Levac D, Colquhoun H, O'Brien K: **Scoping studies: advancing the methodology**. *Implementation Science* 2010, **5**(1):69.
7. **Preferred Reporting Items for Systematic Reviews and Meta-Analysis extension for Scoping Reviews (PRIMSA-ScR)** [http://www.prisma-statement.org/Extensions/InDevelopment.aspx]
8. Fardet A, Rock E, Bassama J, Bohuon P, Prabhasankar P, Monteiro C, Moubarac JC, Achir N: **Current food classifications in epidemiological studies do not enable solid nutritional recommendations for preventing diet-related chronic diseases: the impact of food processing**. *Adv Nutr* 2015, **6**(6):629-638.
9. Monteiro CA, Cannon G, Moubarac JC, Levy RB, Louzada ML, Jaime PC: **The UN Decade of Nutrition, the NOVA food classification and the trouble with ultra-processing**. *Public Health Nutr* 2017:1-13.
10. Lowder SK, Skoet J, Raney T: **The Number, Size, and Distribution of Farms, Smallholder Farms, and Family Farms Worldwide**. *World Development* 2016, **87**:16-29.
11. Cousins B: **Working Paper 16: What is a ‘smallholder’? Class-analytic perspectives on small-scale farming and agrarian reform in South Africa**. In.: Institute for Poverty Land and Agrarian Studies; 2010.
12. **Small Island Developing States** [https://sustainabledevelopment.un.org/topics/sids/list]
13. **Southern African Development Community: member states** [http://www.sadc.int/member-states/]
14. Durao S, Schoonees A, Ramokolo V, Oliveira J, Kristjansson E: **Community-level interventions for improving access to food in low- and middle-income countries [Cochrane Protocol]**. In: *PROSPERO:CRD42015024032* 2015.
15. Snilstveit B, Bhatia R, Rankin K, Leach B: **3ie evidence gap maps: a starting point for strategic evidence production and use, 3ie Working Paper 28** In.: New Delhi: International Initiative for Impact Evaluation (3ie) 2017.
16. REDCap: Research Electronic Data Capture. http://www.project-redcap.org

---

Start date: 01/08/2017

Anticipated completion date: 31/03/2017

Stage of review on 5th December 2017: Data abstraction

Funding: The Community Food & Health Project is supported by a Foundation Award, from the Global Challenges Research Fund, through the UK Medical Research Council. Grant reference: MR/P025250/1

Review team members (working directly on this review):

Professor Nigel Unwin, University of Cambridge, MRC Epidemiology Unit and Centre for Diet and Activity Research (CEDAR)

Dr Cornelia Guell, University of Exeter, European Centre for Environment and Human Health, formerly at CEDAR

Dr Emily Haynes, University of Exeter, European Centre for Environment and Human Health

Miss Catherine Brown, University of the West Indies, Chronic Disease Research Centre (Barbados)

Miss Constance Wou, University of Cambridge, MRC Epidemiology Unit and Centre for Diet and Activity Research (CEDAR)

Mr Chris Vogliano, Massey University, School of Public Health (New Zealand)

Appendix A

Literature search strategy - example using syntax appropriate for Pubmed.

A) Community food production initiatives

(commun*[tiab] OR urban*[tiab] OR local*[tiab] OR school[tiab] OR work[tiab] OR workpl*[tiab] OR smallhold*[tiab] OR “small holder”[tiab]) AND (agricult*[tiab] OR horticult*[tiab] OR garden*[tiab] OR farm*[tiab] OR agroprocessing[tiab] OR “agro processing” [tiab] OR aquacultur*[tiab] OR fishing[tiab] OR fisheries[tiab] OR fishery[tiab] OR maricult* OR “food production”)

B) Small Island Developing States and Southern African Countries

(Angola[tiab] OR Anguilla[tiab] OR Antigua[tiab] OR Antilles[tiab] OR Aruba[tiab] OR Bahamas[tiab] OR Barbuda[tiab] OR Barbados[tiab] OR Belize[tiab] OR Bermuda[tiab] OR Botswana[tiab] OR Caicos[tiab] OR Caledonia[tiab] OR “Caribbean Region”[Mesh] OR Cayman[tiab] OR Comoros[tiab] OR “Cook Islands” [tiab] OR Cuba[tiab] OR Curacao[tiab] OR Congo[tiab] OR Dominica[tiab] OR Dominican[tiab] OR Fiji[tiab] OR Grenada[tiab] OR Grenadines[tiab] OR Guadeloupe[tiab] OR Guam[tiab] OR Guinea-Bissau[tiab] OR Haiti[tiab] OR Jamaica[tiab] OR Kiribati[tiab] OR Lesotho[tiab] OR Lucia[tiab] OR Maarten[tiab] OR Madagascar[tiab] OR Malawi[tiab] OR Maldives[tiab] OR Marshall[tiab] OR Martinique[tiab] OR Mauritius[tiab] OR Melanesia[Mesh] OR Micronesia[tiab] OR Montserrat[tiab] OR Mozambique[tiab] OR Namibia[tiab] OR Nauru[tiab] OR Nevis[tiab] OR Niue[tiab] OR Palau[tiab] OR Papua[tiab] OR Polynesia[tiab] OR Principe[tiab] OR Kitts[tiab] OR Samoa[tiab] OR “Sao Tomé” [tiab] OR Seychelles[tiab] OR Singapore[tiab] OR Solomon[tiab] OR “South Africa” [tiab] OR Suriname[tiab] OR Swaziland[tiab] OR Tanzania[tiab] OR Timor-Leste[tiab] OR Tonga[tiab] OR Trinidad[tiab] OR Tobago[tiab] OR Tukelau[tiab] OR Turks[tiab] OR Tuvalu[tiab] OR “Puerto Rico” [tiab] OR Marianas[tiab] OR Martinique[tiab] OR Vanuatu[tiab] OR Verde[tiab] OR Vincent[tiab] OR “Virgin Islands” [tiab] OR Zambia[tiab] OR Zimbabwe[tiab])

C) Limit to 1 Jan 1997 to 31 Dec 2016

("1997/01/01"[PDAT] : "2016/12/31"[PDAT])

Full search:

(A) AND (B) AND (C)