

Case Studies from different national contexts.

Data sources and methods of analysis used to assess salt, and potential iodine, intake from processed foods

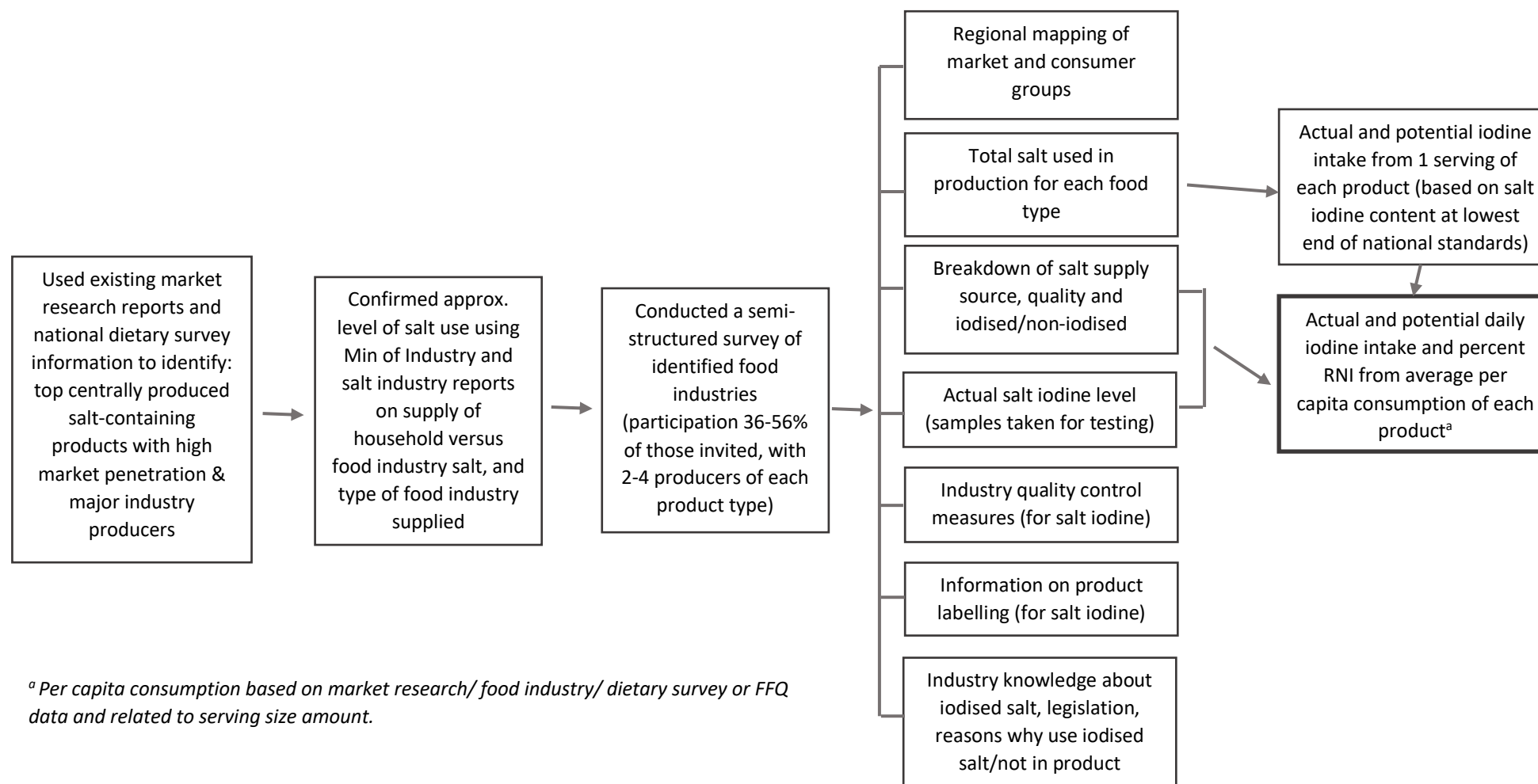
This resource presents an overview of five examples of national experiences using the data sources presented in [Table 2 of Module 1](#). Many of these assessments used a combination of different sources of data and methodological approaches to assess the potential contribution of food industry salt to iodine intake.

Each example shows the combination and sequence of different assessment methods conducted and how outcomes were triangulated to verify the reliability of estimates. In some of the following examples, the steps shown have been adapted to show a generic process based on the use of one methodology in multiple countries. In others, a description of how the same method was applied differently in two countries is shown.

All the processes shown were conducted in liaison with national partners as GAIN-commissioned research/studies under a previous GAIN-UNICEF USI Partnership Project (partnering with WFP in Egypt), unless otherwise specified. The exceptions were: Burkina Faso, where the national government was supported by UNICEF, the Micronutrient Initiative and GroundWork; and Haiti, which was supported by the Iodine Global Network, UNICEF and USAID.

1. Indonesia and the Philippines – using: market research data, Ministry of Industry data, and semi-structured food industry interviews

Research consultancies were commissioned to conduct an analysis of the use of iodised salt by some main food industries producing key salt-containing products^{1 2}. Data came mainly from the food industry, but were used in combination with information from market research and from Ministry of Industry reports. The figure shows the main methodology and process used in both countries. Indonesia and the Philippines have legislation for all food grade salt to be iodised, however, there are loopholes for food industry salt in Indonesia that were highlighted during the consultancy, along with recommendations for addressing these gaps in implementation.

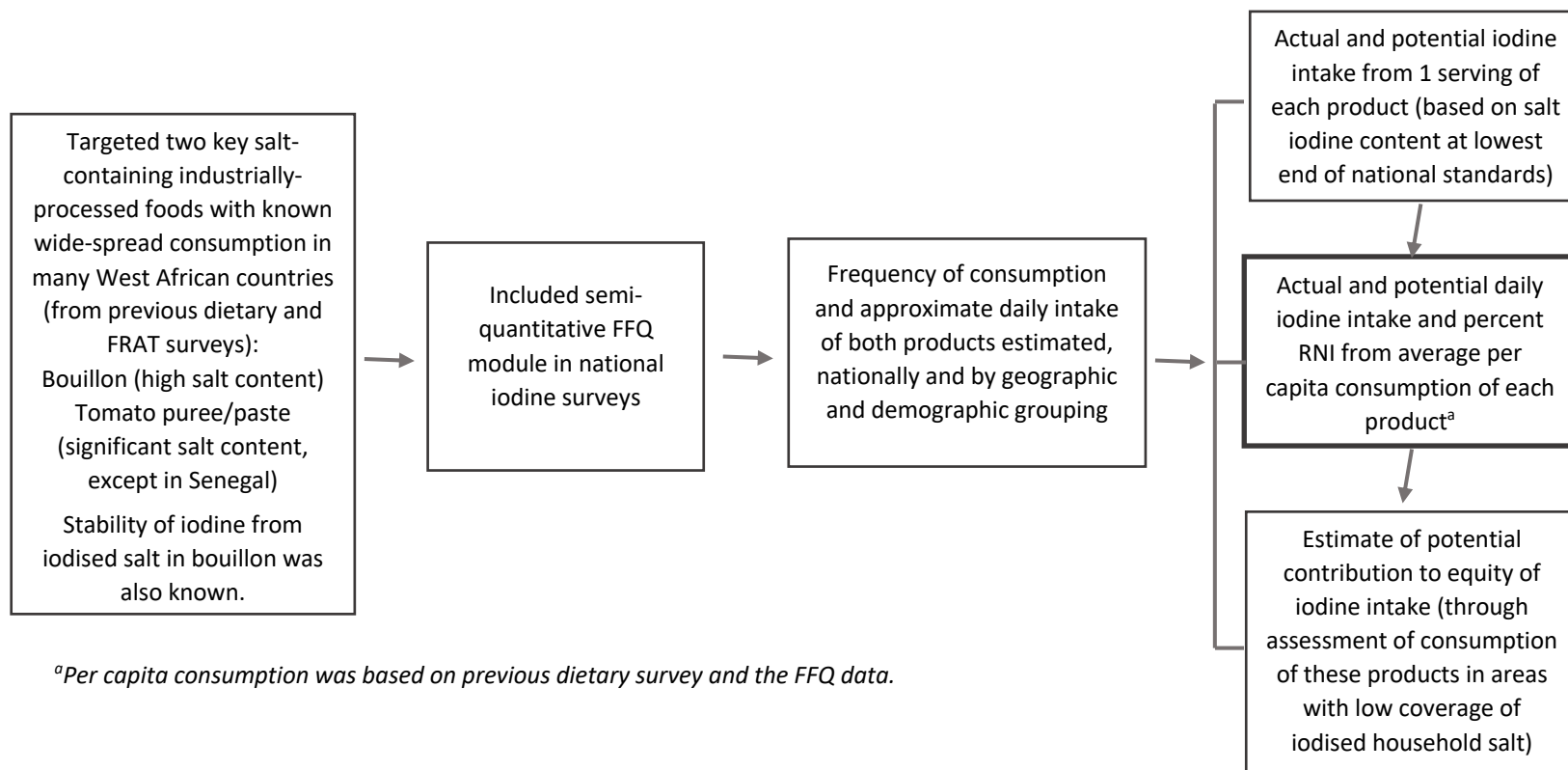


¹ PT Clarity Research, Indonesia, National Agency of Drugs and Food Control, Indonesia & Ministry of Health, Indonesia (2014) *Usage of iodized salt in processed food in Indonesia*. Jakarta, Indonesia: GAIN.

² Nutrition Center of the Philippines (2015) *Survey of Food Processors Utilizing Iodized Salt*. Taguig City, Manila: Nutrition Center of the Philippines

2. Burkina Faso, Ghana and Senegal – using: survey FFQ module data-based source

National managers of programmes to achieve optimal iodine status took advantage of planned national nutrition/iodine surveys to incorporate FFQ modules into the survey questionnaires in these three countries^{3 4 5}. The methodology used to estimate frequency and semi-quantitative amount of product intake was slightly different in Burkina Faso to in the other two countries. The survey datasets included information on iodine status and access to iodised household salt and, in Ghana and Senegal, the data have been used to further investigate the association between iodine status and reported consumption of FFQ foods products with high potential to contribute to iodine intake, taking into account the household salt iodine level.



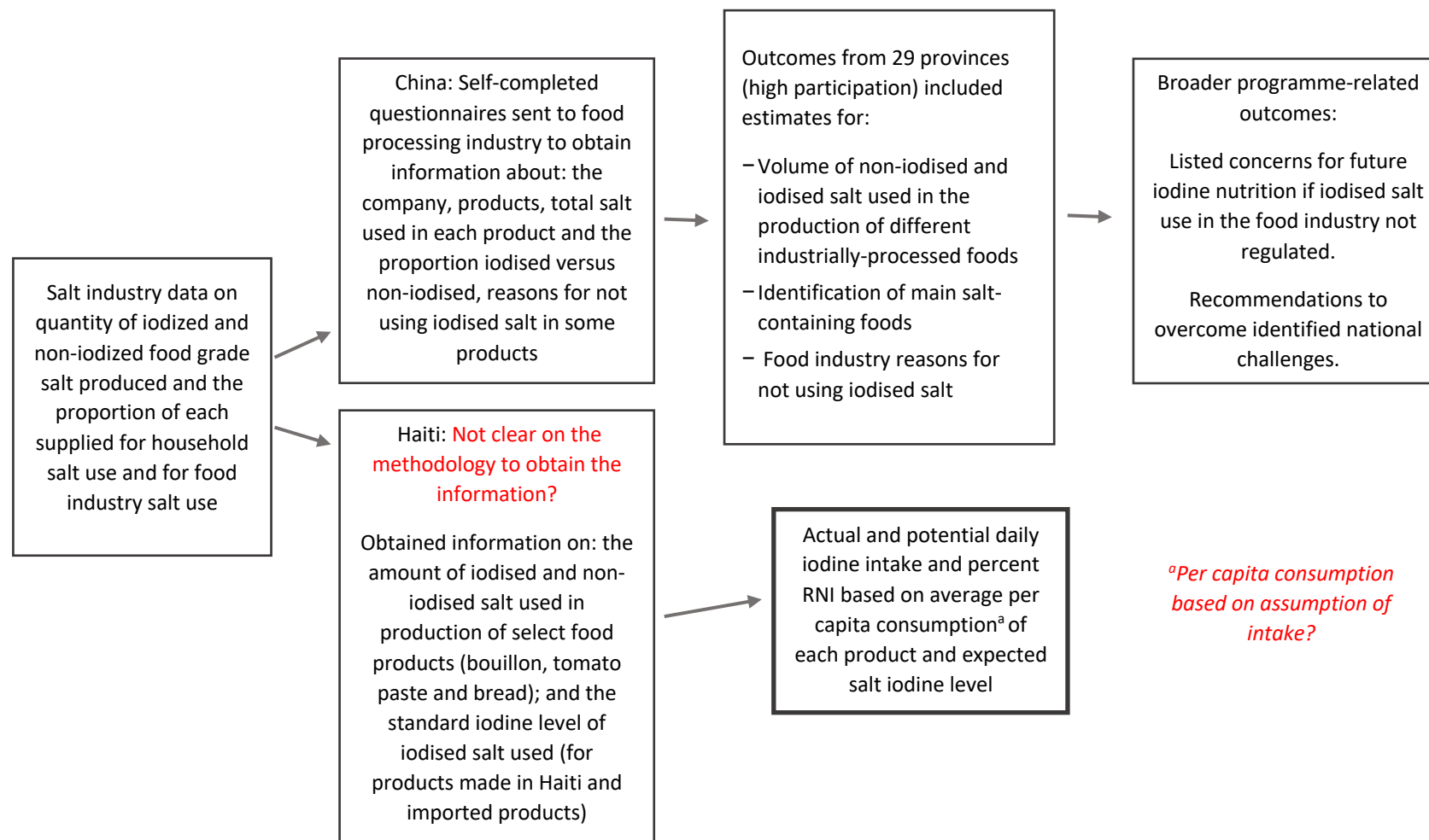
³ IPDSR Senegal (2016) Final Report 2014 National Survey on Household Use of Iodised Salt and Bouillon and Iodine Status among Women of Reproductive Age Senegal. <http://www.gainhealth.org/wp-content/uploads/2018/03/Final-Report-on-TDCI-in-Senegal-August-2016-FR.pdf> (accessed March 2018).

⁴ Ministère de Santé, Direction de la Nutrition, Burkina Faso (2014) *National iodine status and anemia survey, Burkina Faso*

⁵ GHS, GAIN, UNICEF. National Iodine Survey Report, Ghana 2015. GHS, 2018

3. China and Haiti – using: salt and food industry-based data sources

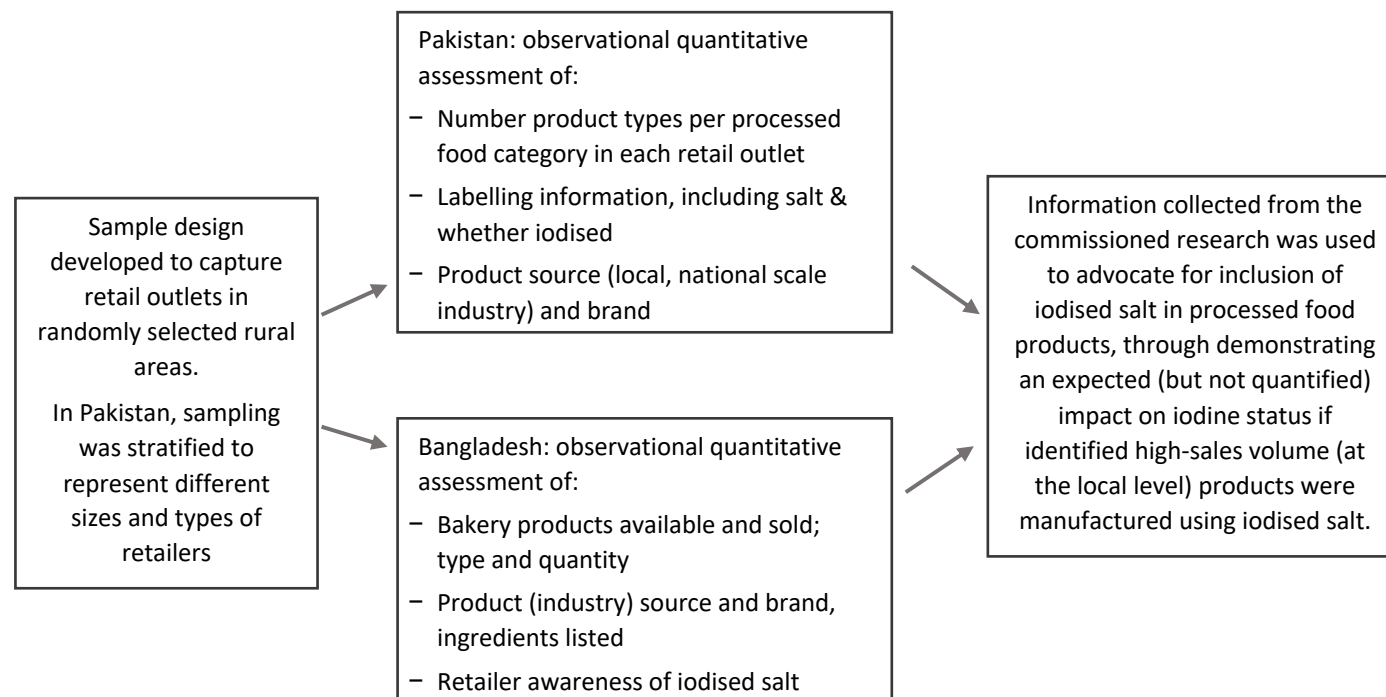
In China, research was commissioned to review the supply and use of iodised and non-iodised salt by the processed food industry⁶. In Haiti, a technical inter-agency team reviewed previous (*Technoserve and other? Ref?*) studies of the salt industry, along with the current situation for salt production and utilisation of salt by the bouillon and tomato paste industries and by large bakeries, to compile a preliminary analysis of the total supply of food grade (iodised) salt in the country.



⁶ China National Salt Industry Corporation (2010) *Survey report on the addition of iodized salt in processed foods in China*.

4. Pakistan and Bangladesh – using: food wholesale- and retail-based data sources

Research was commissioned to investigate the availability and sales patterns of processed foods in rural areas of Pakistan and Bangladesh^{7 8}. In Pakistan the research covered a wide range of processed food products, not all of which were key salt-containing foods. In Bangladesh the research focused on bakery products (at retail outlets). Interviews were also conducted with bakeries in Bangladesh (presented separately in Example 5).

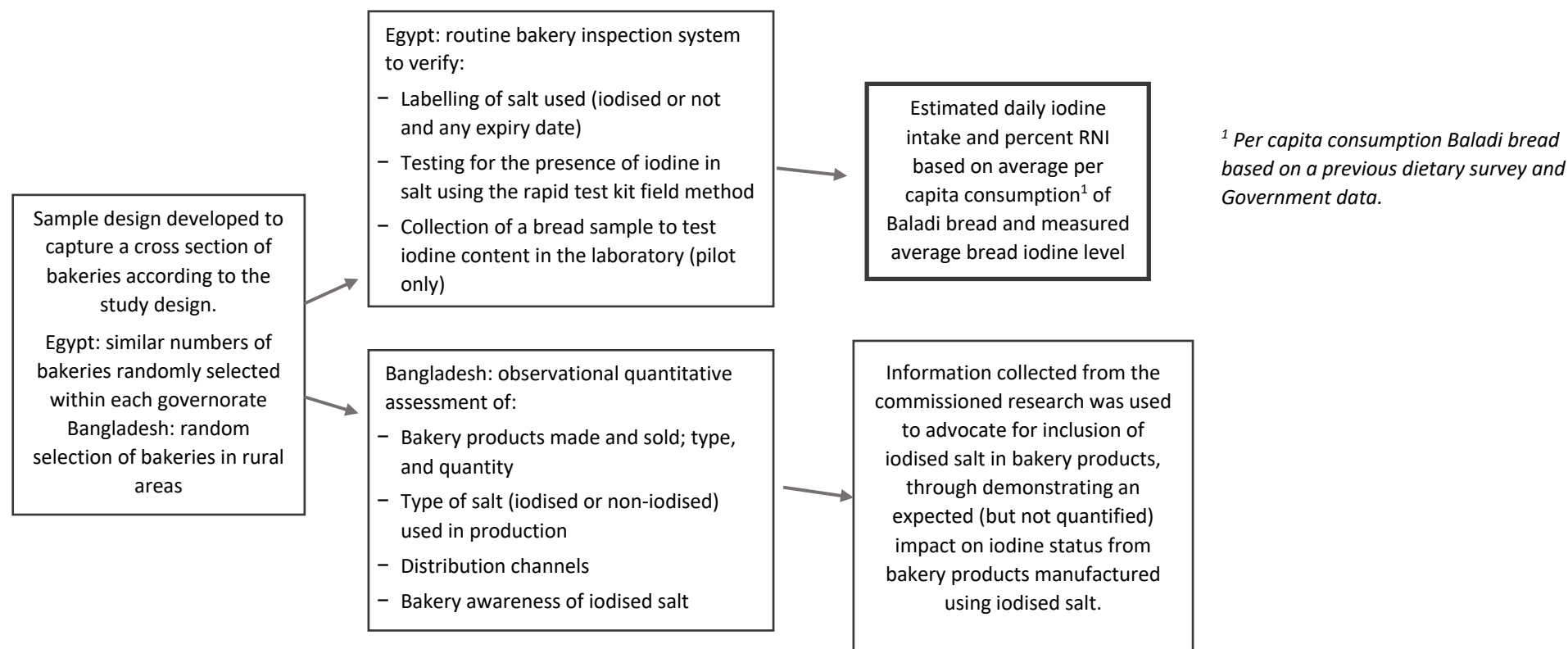


⁷ The Nielsen Company (2011) *Study on processed foods in rural market - Pakistan*. Global Alliance for Improved Nutrition

⁸ The Nielsen Company (2010) *Market research on processed food in rural Bangladesh*. Global Alliance for Improved Nutrition

5. Egypt and Bangladesh – using: bakery-based data sources

In Egypt the assessment was conducted as the first step in establishing a protocol to monitor bakery use of iodised salt in the production of Baladi bread, which is mandated under Egyptian legislation for salt iodisation.⁹ Salt test results were recorded in the national bakery management information system established to monitor the use of fortified flour in bakeries. Testing of bread iodine content was implemented as part of the system pilot, to check agreement with the (routine and continued) salt iodine field test results and confirm that iodine was retained during the baking process. In Bangladesh, bakery research was commissioned along with the retail outlet study in the previous Example 4 and was focused on a randomly selected sample of bakeries in rural areas only. A similar method to that used in Egypt was implemented in New Zealand to assess the iodine content of a representative sample of bread along with assessing iodine status of children following implementation of mandatory use of iodised salt in bread.¹⁰



¹ Per capita consumption Baladi bread based on a previous dietary survey and Government data.

⁹ Knowles J, van der Haar F, Shehata M, et al. (2017) Iodine Intake through Processed Food: Case Studies from Egypt, Indonesia, the Philippines, the Russian Federation and Ukraine, 2010–2015. *Nutrients* **9**, 797.

¹⁰ Edmonds J, Ryan T, New Zealand, et al. (2012) *Dietary iodine intake of New Zealand children following fortification of bread with iodine: prepared for DFR5 Monitoring Group*. Wellington [N.Z.: Ministry of Agriculture and Forestry].