gain
Global Alliance for Improved Nutrition

INVESTING IN NUTRITION, INVESTING IN WOMEN

Priority Value Chains in South and Southeast Asia

Why invest in nutrition?

- Malnutrition in all its forms continues to be a major public health challenge worldwide, and progress on improving it has been very slow, with no country on track to meet global nutrition goals and the number of people affected by hunger or unable to afford a healthy diet rising in recent years[1,2].
- Malnutrition has major negative consequences for individuals and societies, including increasing mortality, reducing wellbeing, shortening lives, lowering economic productivity, and limiting educational attainment[3].
- Poor diets are estimated to be responsible for more deaths than any other risk factor, including smoking[4].
- Malnutrition also has large economic costs: the Food and Agriculture Organization estimates that malnutrition costs the global economy approximately **US$3.5 trillion per year**, or **5% of global GDP**[5], and the OECD estimates that treating obesity-related diseases will cost **US$425 billion per year across 52 countries**[6].

Due to these high social and economic costs, and benefits that cut across sectors and last lifetimes, investing in nutrition is one of the most efficient ways to achieve and sustain human wellbeing.

With increased interest in healthy eating, particularly in emerging markets, nutritious foods also represent a market opportunity for companies. And, given increased regulation, such as soda taxes and bans on certain additives, focusing on nutritious foods can help reduce regulatory risk for a company. It also offers a way to achieve alignment with the 2X Criteria (see box below).

2X

Alignment with the 2X Criteria

The 2X Criteria challenge aims to **drive investment in women**. Investments align with the 2X Criteria if they meet basic Environment, Social, Governance, and Accountability requirements; meet at least one of the six 2X Criteria; and provide a time-bound commitment to meeting one additional criterion. One of the six criteria is giving women access to products/services that enhance their wellbeing. Nutritious foods fit clearly within this category – as long as the foods in question align closely to the nutrition needs of women in the target communities, like the foods highlighted here.

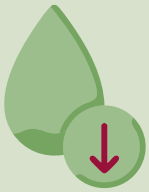
Source: https://www.2xchallenge.org/2xcriteria

Why is nutrition a key sector for impacting women and girls?

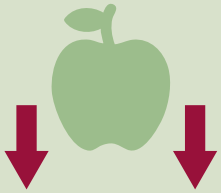
Women worldwide, but particularly in low- and middle-income countries, suffer a high prevalence of malnutrition.

About **73%** of adult women in South and Southeast Asia are estimated to be deficient in one or more key micronutrients – 307 million women in South Asia alone[7].

Over **15%** of South and Southeast Asian women are underweight.



Well over **a third of women and adolescent girls** in the region have anaemia [1].



Levels of undernutrition are higher among women in poor households and living in rural areas[8].

Because nutrition underpins many health, educational, and employment outcomes, supporting nutrition for women and adolescent girls can improve their wellbeing and help them achieve their full potential.

Which are the key value chains to support in South & Southeast Asia to maximise nutritional impact on women & girls?

Applying a rigorous quantitative analysis (see box at right), GAIN has identified priority nutritious foods that are well-matched for the needs of South and Southeast Asia's women and girls. As shown in the figure below (in which higher scores indicate a more nutritious food), top bets include:

- **Organ meats**, in particular chicken, lamb, and beef liver and other chicken organs. These foods are dense in multiple micronutrients, such as vitamins A and B12, iron, and zinc, which makes them particularly good for combatting night blindness and nutrition-related anaemias, and promoting growth and cognitive and immune functions. Yet they tend to be rarely consumed.

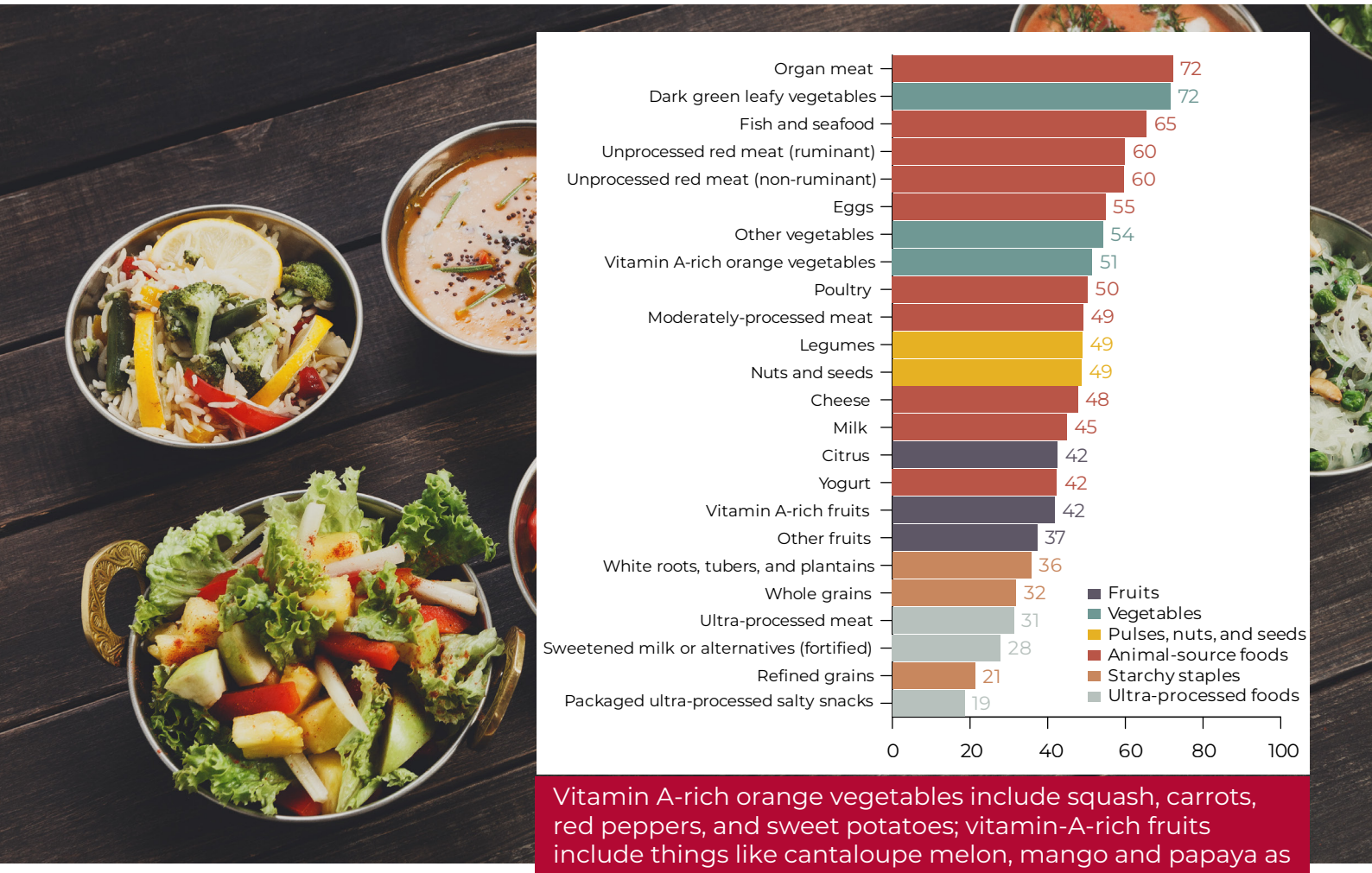
Methods

The analysis consisted of four steps:

- Reviewing existing research to identify the key nutrition and health challenges faced by women and girls in South and Southeast Asia
- Using this to adjust the Nutritional Value Score, a holistic metric for scoring foods' nutritional value, to be tailored to the specific needs of women and girls in the region
- Using detailed data on composition of locally available, commonly consumed foods from South and Southeast Asia to calculate scores for **397 unique foods from 24 food groups**
- Comparing these to data on foods currently consumed to highlight particular 'best bets' for increasing consumption through investment

- **Dark green leafy vegetables**, in particular spinach and local greens like amaranth leaves, crown daisy, and moringa. These foods are rich in folate, vitamins A and C, iron, calcium, potassium, and magnesium, while also being low in calories and fat and high in fibre, which make them good both for ensuring adequate micronutrient intakes and for obesity prevention. While they are already somewhat popular in Southeast Asia, there is room for boosting consumption—and they are not widely consumed in much of South Asia. Some of these foods may have environmental sustainability benefits, as well (see box below).

- **Other vegetables** could also make important dietary contributions – though this is a very diverse food category, so the potential benefits vary depending on the type of vegetable. For example, seaweed is rich in many vitamins and minerals, including vitamin A, folate, calcium, potassium, and magnesium, as well as healthy omega-3 fatty acids, which support heart and brain health. Asparagus is rich in folate, vitamin A, potassium, and other vitamins and minerals – as well as fibre.
- **Fish and seafood**, in particular dried fish like anchovies and herring, which are rich in multiple minerals (including iron, zinc, calcium, potassium, and magnesium) and omega-3 fatty acids. These help address iron-deficiency anaemia while supporting growth, cognition, and immunity, boosting energy levels, and reducing risk of osteoporosis and cardiovascular disease. Dried fish (when processed with minimal additives) pack a particular punch, since the nutrients in them are highly concentrated. While fish and seafood are widely consumed in Southeast Asia, they are rarely consumed in parts of some South Asian countries, like India and Pakistan.
- **Unprocessed red meat,** such as goat, mutton, and water buffalo, eggs, and poultry. These foods might not be highly recommended in all populations, and they are already widely consumed in Southeast Asia, but for many South Asian women (who generally do not consume them in large amounts at present), they would contribute important vitamins (such as vitamins A, D, and B12) and minerals (like iron and zinc), as well as high-quality protein. Less than a third of South Asian women eat meat on a typical day, and less than one quarter eat eggs, so there is considerable room for boosting demand.



Vitamin A-rich orange vegetables include squash, carrots, red peppers, and sweet potatoes; vitamin-A-rich fruits include things like cantaloupe melon, mango and papaya as well as local fruits; ruminants are cows, sheep, and goats.

In contrast, investment in grain value chains and roots and tubers would have comparatively less benefit for women's nutrition, as would any highly processed foods. While fruits are part of a healthy diet for all population groups, their relative additional nutritional benefit for South and Southeast Asian women is also lower than other food group options, like vegetables, legumes, nuts, and seeds. While dairy products are not among the most impactful foods, they are still highly nutritious options that tend to be underconsumed – particularly by Southeast Asian women.

‘Forgotten’ Crops and Sea Vegetables Offer Opportunities for Nutrition-Environment Synergies

A few of the most nutritious foods for women and girls in South and Southeast Asia are aquatic vegetables, such as seaweed and water mimosa. These crops do not use land, freshwater, or fertilisers, and they can play a role in carbon sequestration and improving water quality, making them a ‘double win’ for environmental sustainability and nutrition.

In addition, many nutritious Asian foods are indigenous or traditional foods that may not be widely eaten today – so-called ‘forgotten foods’. For example, **aibika (Abelmoschus manihot)** is native to tropical Asia, where it grows in warm, wet climates, producing lush leaves rich in several vitamins and minerals. **Indian pennywort (Centella asiatica**) is another nutrient-rich leafy green, which has been used in Ayurvedic medicine in India for millennia. **Moringa and amaranth leaves** are grown throughout the region, though not widely commercialised, and are also highly nutrient dense. Investing in these types of ‘forgotten foods’ can have major environmental sustainability benefits.

For example, Indian pennywort requires few inputs, thrives in nutrient-poor soils, and can remove heavy metals from water and soil. Moringa and amaranth are drought-tolerant, adaptable to harsh conditions, and can help combat soil erosion. Continued cultivation of indigenous crops like aibika can help to ensure their genes are preserved and that they can continue to adapt to changing conditions, helping increase resilience to climate change.

Which types of investment opportunities exist to support these types of foods?

Investments all along value chains can be used to improve accessibility, availability, and affordability of these foods. For example, investment in cold chains, which are underdeveloped in parts of South and Southeast Asia, would support all the foods mentioned here (aside from eggs). Investment in processors that freeze, can, or dry vegetables, or dry or smoke fish, could help reduce losses, extend shelf life, and support better access across seasons and in remote areas. However, many rural areas of South and Southeast Asia lack access to high-quality facilities for food preservation, suggesting opportunities for increasing quality, safety, and quantity of these foods, and reducing post-harvest losses and foodborne disease prevalence, through investment in improved processing technologies and companies using them.

Investment in production of vegetables or livestock and fisheries products could boost availability and affordability, including of organ meats. However, because animal-source foods, particularly ruminant meat, can have higher environmental burdens, it is important to bring a sustainability lens to such investments and support adoption of the most sustainable options and production practices—and to avoid investments supporting highly processed products.

In South and Southeast Asia, many vegetables are grown by smallholder farmers, many livestock (particularly ruminants) are raised by small-scale ranchers, and many fish are caught or farmed by small-scale fishers. Thus, investments in these value chains can also benefit small-scale producers and their (often low-income) households. Investments can also support women along the value chain—another 2X Criterion. For example, a joint analysis by GAIN and Sagana has highlighted that investments in South Asian dairy value chains could be particularly beneficial to women, who make up about **75% of the sector's workforce**, including as small-scale farmers—but face barriers to accessing high-quality infrastructure, credit, training, and technology[9]. Investments in these areas would be a double win for women as consumers and producers.

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