



# Nutrition approaches of MYSAP Inland



Implemented by:



# NUTRITION APPROACHES OF MYSAP INLAND

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## About MYSAP Inland

The Multiannual Indicative Programme (2014–2020) identifies that approximately one third of children in Myanmar suffer chronic undernutrition (stunting), the nationwide prevalence of moderately underweight children is 32% and the average proportion of total household expenditure on food is 68%. Fish provides more than 70% of animal protein, with average consumption levels estimated at 20–40 kg per person per year. However compared to other neighboring countries aquaculture only provides a small proportion of the total fish consumed. To meet the growing demand for fish, it is essential that Myanmar develops a sustainable aquaculture industry that minimizes potential environmental impacts and ensures aquaculture practices are socially acceptable and economically sound. The Myanmar Sustainable Aquaculture Programme (MYSAP) inland component is increasing the proportion of cultured affordable freshwater fish available in Myanmar markets.

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# Introduction

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The Myanmar Sustainable Aquaculture Programme (MYSAP) is funded by the European Union (EU) and the German Federal Ministry for Economic Cooperation and Development (BMZ) and is implemented by Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH and the Department of Fisheries. WorldFish Myanmar is realizing MYSAP's inland component under a GIZ grant agreement, with Ar Yone Oo, BRAC Myanmar and Malteser International as sub-contracted implementing partners.

MYSAP Inland is supporting sustainable intensification of small-scale freshwater aquaculture, improving the availability of and access to nutritious, affordable food and increasing incomes for poor and vulnerable households in five fish-deficient townships in the Shan State and the Sagaing Region.

Small-scale aquaculture is defined as a household pond with an area less than 0.5 acres (0.2 ha), which holds water for more than six months per year. MYSAP Inland also works with rice-fish systems and community ponds of all sizes.



Photo credit: Than Than Sae/WorldFish

Women involved in post-harvest activities in a fish farm in Madaya, Mandalay.

MYSAP Inland is addressing the following constraints to aquaculture:

- Promotion of enabling policy and legislation;
- Making quality aquaculture inputs readily available;
- Supporting hatchery and nursery production facilities;
- Promotion of improved biosecurity and disease management and control;
- Facilitating the involvement of small-scale producers in the value chain;
- Sustainable intensification of small-scale aquaculture;
- Promotion of climate change smart aquaculture production systems; and,
- Support for vocational and tertiary aquaculture education, training and extension services.

In addition to developing small-scale aquaculture, MYSAP Inland is supporting improved human nutrition, using small-scale household ponds as the entry point for nutrition interventions and the promotion of integrated vegetable and fruit production on fish pond and rice field embankments and in homestead gardens. Households are also encouraged to stock small indigenous fish species in polyculture with large fish species in their pond. As well as being nutrient rich and fast growing, small indigenous fish species can be more regularly harvested, contributing to both household nutrition and cash flow.

MYSAP Inland is promoting target households to increase the frequency, quantity and quality of fish and vegetables consumed. This gives greater dietary diversity and improved nutrition, particularly among women of reproductive age (15-49 years of age) and children in the first critical 1000 days of life from conception to two years of age.

MYSAP Inland, which began in April 2017 and runs until May 2021, is currently working with over 1,530 women of reproductive age and 336 children under the age of 5 years of age.

By doing the above, MYSAP Inland is improving household nutrition and health, livelihoods and income, and the resilience and security of direct beneficiaries, while also increasing the availability of affordable cultured fish in local markets.

MYSAP Inland is conducting field activities in the five (05) following townships:

Kale (ကလေး - MMR005027) Township, Sagaing Region

Shwebo (ရွှေဘို - MMR005004) Township, Sagaing Region

Kengtung (ကျိုင်းတုံ - MMR016001) Township, Eastern Shan State

Pinlaung (ပင်လောင်း - MMR014009) Township, Southern Shan State

Amarapura (အမရပူရ - MMR010006) Township, Mandalay Region.

## Purpose of this document

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This document was drafted to provide a common understanding among the key stakeholders (community members, implementing partners, donors and WorldFish and other interested parties) of the nutrition approaches undertaken by MYSAP Inland. These approaches are drawn from previous learning experience from other WorldFish projects, both in Myanmar and in neighboring countries. This document serves only as a guide, so feedback and recommendations from all stakeholders are welcome. Open communication with MYSAP Inland on what works and what does not work is encouraged, to ensure that the approaches are widely applicable, inclusive and meaningful for the target communities.



Photo credit: Quennie Piazolo/WorldFish

A woman small-scale aquaculture farmer showing the record book in Pyapon, Delta, Myanmar.

# Modalities

MYSAP Inland is collaborating with implementing partners, including the Department of Fisheries and Ar Yone Oo, BRAC Myanmar and Malteser International, contracted on MYSAP Inland sub-grant agreements in its five townships. Through Aquaculture Technical Officers and Community Facilitators, the implementing partners are delivering season-long extension and training services to direct beneficiary households on sustainable small-scale aquaculture, integrated vegetable and fruit production on pond embankments and in homestead gardens and on improved human nutrition covering the benefits of eating fish and improved dietary diversity. MYSAP Inland and WorldFish Myanmar advisors and staff provide back-stopping technical support (Table 1) both in the field and remotely.

Key interventions	Methods and description (how?)	Target audience	By whom (gendered approach)	Duration/frequency
<p>Training of Trainers on nutrition, WASH, food safety and quality control</p> <p>(combined with small-scale aquaculture – SSA, training)</p>	<p>The training focuses on the importance of dietary diversity, consuming fish (and other animal-source foods), including small indigenous fish species (SIS)<sup>1</sup> (with the head on) and adopting effective WASH practices. It ensures that these result in improved nutrition, especially for women of reproductive age and children under 5 years old.</p> <p>It is critical to emphasize both increased aquaculture production and enhanced adoption of good nutrition and WASH practices to provide a balanced and holistic message.</p> <p>The TOT training also includes training on gender mainstreaming and the use of the Green Way mobile phone application which includes aquaculture and nutrition information sources.</p> <p>Participants are expected to demonstrate what they have learned for each topic using different facilitation methods.</p>	<p>Aquaculture Technical Officers and Community Facilitators from implementing partners and Department of Fisheries staff from MYSAP Inland townships</p>	<p>MYSAP Inland and WorldFish staff covering key topics including gender mainstreaming</p> <p>Invited nutrition and medical staff from Save the Children</p> <p>Invited staff from Greenovator</p> <p>Department of Fisheries experts (and/or consultants) on postharvest, preservation and food safety and quality control</p> <p><b>Notes for all courses:</b></p> <ul style="list-style-type: none"> <li>• Confirm the literacy level of the participants</li> <li>• Is translation needed into local languages like Shan, Chin, Akha, Lahu?</li> <li>• Do participants understand any English?</li> </ul>	<p>Seven days, combined with small-scale aquaculture (SSA), human nutrition, WASH, and use of the Green Way app.</p> <p>Three days dedicated fish preservation, food safety and quality control training.</p>



Key interventions	Methods and description (how?)	Target audience	By whom (gendered approach)	Duration/frequency
<p>Season-long training on basic nutrition, and food safety and quality control</p>	<p>Having trained the staff of key implementing partners and after the selection of direct beneficiary households (dbh) with a small-scale pond, dbh are formed into village groups and each group selects a demonstration farmer who's pond is the site of the 27 TOT training modules delivered in 6-8 half day sessions at appropriate times of the fish, vegetable and fruit culture season by trained implementing partner staff. All groups prepare seasonal agriculture calendars for men and women to identify the best times of year for conducting training sessions. MYSAP Inland funds all inputs, including pond preparation, fish seed and fish feed, for the demonstration pond which is used as the training venue.</p> <p>Training covers the following:</p> <ul style="list-style-type: none"> <li>• The benefits of eating fish and SIS in particular</li> <li>• Nutrition, such as infant and young child feeding, causes of malnutrition, food groups</li> <li>• Gender mainstreaming</li> <li>• Small-scale aquaculture (SSA) technology</li> <li>• Integrated vegetable and fruit production</li> <li>• Postharvest and food safety and quality control.</li> </ul> <p>The appropriateness of each module session for the target audience needs to be assessed. For instance, the SSA module may not be applicable to fish vendors/processors; however, they are given an opportunity to join if they want to.</p> <p>Multiple stakeholders are consulted to ensure the applicability of training to be offered, including consumers, fish vendors/ processors, staff from implementing partners, private business, the Department of Fisheries and the Myanmar Fisheries Federation. This is done when engaging fish vendors/processors in activities to improve the quality of fish sold in the market as well as food safety practices.</p>	<p>SSA farmers and direct beneficiary household members Fishers Fish vendors/ processors</p>	<p>Staff from implementing partners</p> <p><b>Notes:</b></p> <ul style="list-style-type: none"> <li>• What is the most convenient time of day to schedule the training for the participants?</li> <li>• Are women/men able to discuss and engage freely when trained together?</li> <li>• What is the literacy level of the participants?</li> <li>• Is translation required into local languages like Shan, Chin, Akha, Lahu?</li> <li>• Is it appropriate that SSA farmers, and fish vendors are grouped together in the sessions?</li> <li>• Is the venue a safe/neutral space for women/men, fish vendors/processors, and people of different religions and ethnic groups?</li> </ul>	<p>6-8 sessions across the culture season.</p> <p>Each session is covered in a half day</p> <p>Preservation and food safety and quality control training is a separate stand-alone training.</p>

Key interventions	Methods and description (how?)	Target audience	By whom (gendered approach)	Duration/frequency
<p>Social and behavior change communication (SBCC) activities focusing on fish consumption and dietary diversity,</p>	<p>The most significant barriers and enablers to adopting practices by the priority group were identified based on a barrier analysis study. The key interventions were developed by staff from Save the Children, implementing partners, MYSAP Inland and WorldFish Myanmar.</p> <p>Activities:</p> <ul style="list-style-type: none"> <li>Identifying mothers, fathers, peer group members, grandparent group members</li> <li>Monthly consultation among the priority group on the barriers faced in adopting behaviors</li> <li>Awareness raising activities at the village, region, state and national level: school days, village development committee meetings, health clinic (immunization days, pregnant and lactating women (PLW) consultation, and the national Ministry of Health and Sports nutrition month campaign in August)</li> <li>Using the Green Way mobile application platform to share the importance of fish, vegetables and diversity of food in the diets</li> <li>Creative activities, such as role playing, practical demonstrations, counselling, Q&amp;A's, home visits together with promoters.</li> </ul>	<p>Priority group, promoters, community women/men, MYSAP Inland participants</p> <p><b>Notes:</b> Develop materials focusing on messages that can facilitate adoption of behaviour change "triggers."</p>	<p>IP staff MYSAP Inland and WorldFish staff</p> <p><b>Notes:</b></p> <ul style="list-style-type: none"> <li>What is the most convenient time of day to schedule the training for the participants?</li> <li>What is the literacy level of the participants?</li> <li>Is translation required into local languages like Shan, Chin, Akha, Lahu?</li> <li>Can different community members participate together?</li> <li>What is the literacy level of the participants?</li> <li>Is the venue a safe/neutral space for women/men, fish vendors/processors, different religions and ethnic groups?</li> <li>Are the materials used easy to understand by trainees? Ask participants for suggestions on how to improve IEC materials.</li> </ul>	<p>Once a month.</p>

Key interventions	Methods and description (how?)	Target audience	By whom (gendered approach)	Duration/frequency
<p>Providing SIS broodstock, vegetable and fruit seeds</p>	<p>When consumed whole, small indigenous fish species, such as mola (<i>nga bel phyu</i>), darkina (<i>nga daun zin</i>) and pool barb (<i>nga kor mar</i>), are rich in essential micronutrients and animal protein.</p> <p>MYSAP Inland is promoting the stocking of SIS together with large fish species like carps into small-scale household ponds. SIS can mature in a month and partial harvesting can begin 6 weeks after stocking and be conducted every 2 weeks thereafter. This means SIS can be a significant animal-source food for family consumption.</p> <p>Learning from prior experience of other WorldFish projects in Myanmar, MYSAP Inland has contracted fishers to capture from the wild and transport live SIS, which have been nursed and then stocked into all MYSAP Inland supported demonstration farmer ponds in the 2019-20 and 2020-21 culture season. SIS contribute to the overall production and nutritional quality of the pond system and do not hamper the growth of large fish species like carps.</p> <p>Planting vegetables and fruit on pond embankments and in homestead gardens increases dietary diversity among household members. Seasonal calendars are an informative guide to determine which vegetables and fruits have the potential to grow, in the area and at what time of year they should be grown.</p>	<p>SSA farmers, farmers with community ponds</p> <p>Vulnerable groups who have access to nearby ponds</p>	<p>Staff from implementing partners</p> <p><b>Notes:</b></p> <ul style="list-style-type: none"> <li>• Are landless households being included?</li> <li>• Are households with children under 5 years old being prioritized?</li> <li>• Are there barriers to using the technology? How are these barriers being addressed?</li> <li>• Request feedback and comments from participants to further improve on-going activities.</li> </ul>	<p>Once time stocking of SIS each culture season.</p>
<p>Food safety analysis</p>	<p>Sampling of commonly consumed fish-based products (e.g. fish and shrimp pastes, pickled/fermented fish<sup>2</sup>) for food safety risks.</p> <ul style="list-style-type: none"> <li>• Describe the ingredients and post-harvest fish and shrimp production methods</li> <li>• Identify critical points for contamination and food safety risk</li> <li>• Laboratory analysis of samples for parasite life cycle stages</li> <li>• Disseminate the key findings through MYSAP Inland reports</li> <li>• Modification of MYSAP Inland IEC recommendations on the importance of not eating fish and shrimp pastes without thorough cooking to reduce the risk of infection by parasite life cycle stages which are potentially damaging to human health.</li> </ul>	<p>All stakeholders, including government, UN organizations, the private sector, SUN, NGOs, community-based organizations and donors.</p> <p>Actors in the post-harvest value chain</p> <p>Local consumers</p>	<p>WorldFish Myanmar and Department of Fisheries staff</p> <p>MYSAP Inland IEC officer</p> <p>Other WorldFish Myanmar projects</p>	<p>One off sampling</p> <p>On-going dissemination of evidence based IEC materials.</p>

Key interventions	Methods and description (how?)	Target audience	By whom (gendered approach)	Duration/frequency
<p>Pilot testing of low-cost portable fish drier and promotion of dried small fish powder</p>	<p>Observed traditional household fish drying practices with poor adherence to best food safety practices, expose drying product to the risk of contamination and food borne diseases that can have long term health consequences. To address this problem, MYSAP Inland has developed a low-cost portable fish drier that keeps fish covered while drying, reducing the risk of contamination from flies, insects and animals that can be harmful to human health.</p> <p>After fabrication of 60 fish driers at a local shop in Shwebo, 20 selected MYSAP Inland beneficiary households from Kale, Shwebo and Kengtung townships each with a child under 5 years of age, have been selected to community test the simple technology. Feedback will be collected from the community testers on the applicability of the driers and used to further modify the technology before scale out in Myanmar by other donor funded projects including those of WorldFish.</p> <p>Having promoted household production of dried fish, MYSAP Inland and WorldFish will test the production of dried small fish powder. MYSAP Inland has provided electric multi-function kitchen grinders to each group of participants. After sending samples of the dried small fish powder to a laboratory to confirm that the bacterial loads are safe for human consumption, the powder will be used as a complementary food for infants over 6 months of age. Any surplus dried small fish powder produced at home can be sold to give extra household income.</p>	<p>MYSAP Inland beneficiary household members with children under 5 years of age</p> <p>Local consumers</p>	<p>Staff from implementing partners MYSAP Inland and WorldFish staff</p>	<p>Year-round</p>
<p>Strengthening engagement with nutrition stakeholders</p>	<p>MYSAP Inland will fund the participation of MYSAP Inland and WorldFish Myanmar staff to attend nutrition platforms at the regional/ state level and national level including: Scaling Up Nutrition Civil Society Alliance (SUN CSA), Technical Working Group (TWG) meetings, and National Nutrition Month celebrations led by the Ministry of Health and Sports.</p>	<p>All stakeholders, including government, UN organizations, the private sector, NGOs, community-based organizations and donors</p>	<p>Staff from implementing partners, MYSAP Inland and WorldFish Myanmar, field coordinators at the sub-national level of MS-NPAN and meetings of the Food Security Working Group (FSWG)</p> <p>MYSAP Inland and WorldFish Myanmar staff (national level).</p>	<p>Scheduled meetings of sub-national MS-NPAN, national level MS-NPAN, FSWG and TWG.</p>

**Table 1.** Brief guide of key MYSAP Inland nutrition interventions.

# Key interventions

## 1. Training of trainers on nutrition, food safety and quality control

The activity imparts nutrition knowledge and information to the community facilitators who serve as front-line field staff for MYSAP Inland.

The majority of the community facilitators have normally only limited knowledge on basic nutrition, so the training improves their knowledge and their confidence in delivering nutrition messages efficiently when conducting training of direct beneficiary household members and conducting nutrition awareness raising activities at the community level.

The nutrition training component of the TOT training takes 3–4 days. The main topics covered include the following:

- Basic food groups
- Micronutrient types and needs
- The importance of a balanced diet
- Intergenerational dynamics of malnutrition
- Causes of malnutrition
- Breastfeeding and complementary feeding,
- The nutritional value of fish
- Cooking demonstrations with an emphasis on SIS.

The training topics are based on the learning sessions developed by the Save the Children Myanmar LEARN project and are aligned with the guidelines provided by the National Nutrition Centre under the Ministry of Health and Sports. The material developed by SPRING<sup>3</sup> on essential nutrition actions and essential hygiene actions is also used as a reference.

## 2. Basic nutrition, food safety and quality control for MYSAP Inland beneficiaries

The training provides knowledge and basic information on nutrition. It focuses on the importance of eating fish and vegetables and the importance of a diverse diet to achieve good nutrition for household members. Studies in multiple countries have demonstrated that a complementary approach of providing farm inputs (seeds, farm tools) and improved nutrition

knowledge increases positive nutrition outcomes among households (Schreinemachers et al. 2016; de Brauw et al. 2015).

While women in Myanmar maintain traditional roles performing domestic duties, MYSAP Inland encourages engaging men, especially husbands, in nutrition activities. Evidence shows that involving them increases their knowledge, enhances their support for women and improves joint decision-making, which results in improved nutrition among women and children (Nguyen et al. 2018; Tokhi et al. 2018).

## 3. SBCC activities on increased fish consumption and improved dietary diversity

Social behavior change communication or SBCC is the “strategic use of communication approaches to promote changes in knowledge, attitudes, norms, beliefs and behaviors” (Health Communication Capacity Collaborative 2016). The MYSAP Inland SBCC activities are focused on increasing fish consumption and improved dietary diversity of women of reproductive age and of young children in particular. Evidence from other countries shows improved nutritional status after rolling out interventions on homestead food production coupled with SBCC activities among project participants (Olney et al. 2015). These activities have spill-over effects among neighbors by improving nutrition knowledge and adopting positive nutrition behaviors (Hoddinot et al. 2017).

After identifying behaviors to study, through consultation with stakeholders, MYSAP Inland conducted a barrier analysis study to identify barriers and enablers of the priority group. Based on the designing for behaviors change (DBC) framework,<sup>4</sup> it identified bridges of activities and key activities that supported the development of a behaviors change communication strategy by MYSAP Inland to increase the adoption of desired behaviors among the priority group.

In addition, as mobile phones have become increasingly popular in Myanmar, MYSAP Inland is encouraging beneficiaries to use the Green Way

mobile phone application and social media platforms to communicate key messages with non-beneficiaries outside the MYSAP Inland intervention townships.

#### **4. Provision of SIS broodstock, vegetable and fruit seeds to beneficiaries**

A recent diet modeling analysis in Myanmar demonstrated that having large fish species in homestead ponds can help reduce the cost of a nutritious diet by 20% (WFP 2019). However, data in other WorldFish projects shows that the majority of farmers sell large marketable size fish and rarely consume them. This means that large fish often do not directly contribute to the nutrient needs of family members. To address this, MYSAP Inland is promoting the stocking of small indigenous fish species or SIS into ponds together with large carp species, to ensure that fish are accessible, are eaten by and contribute directly to improved household member nutrition. SIS are micronutrient-rich, especially when eaten whole with the head, bones and viscera. SIS are also rich in essential nutrients, such as vitamin A, vitamin B12, iron, calcium, zinc and essential fatty acids, which are important for growth and development of young children (Thilsted 2012; Bogard et al. 2015).

A nutritious diet, however, must include foods other than fish. To increase dietary diversity, MYSAP Inland is promoting the planting of colored vegetables (e.g. moringa and pumpkin) and fruits (e.g. papaya) that are easy to grow on pond embankments and in homestead gardens. For small homesteads, using pond embankments increases the area for vegetable and fruit production. In addition, water from the pond can be used for the plants, while the sludge from ponds (after harvesting and cleaning the pond) can be used as a natural fertilizer.

#### **5. Food safety analysis**

Fish and aquatic animals in fresh and processed form make up the largest share of animal sourced foods in the Myanmar diet. Processed fish and aquatic animal products, such as dried and fermented fish, are estimated to contribute a third of total fish consumption (Youn et al. 2018). Commonly consumed fish-based products in Myanmar have been identified through national consumption surveys, and scoping missions

to and regular sampling of local markets in the MYSAP Inland townships. However, there is lack of information on the safety of processed fish products for human consumption

Reducing the risk of foodborne illness and neglected tropical diseases is an important aspect of improving nutrition and health in Myanmar. Critical points of contamination and food safety risk along the fish value chain have been observed through the Department of Fisheries and WorldFish projects.

MYSAP Inland will collect fish product samples and send them for laboratory analysis to check for microbes, parasites and contaminants, which can pose a risk to human health.

This research will fill knowledge gaps by identifying specific food safety and contamination risks and this will inform the development of targeted solutions.

This research will be used to design applied evidence-based MYSAP Inland activities to mitigate the identified risk areas. Findings and recommendations will be included in MYSAP Inland training delivered to vendors and processors on improved food hygiene practices for fresh and processed fish, as well as working with post-harvest producers on nutrient dense culturally appropriate fish-based products, such as dried or pickled small fish. These products could simultaneously reduce post-harvest loss compared to fresh fish and increase the availability of preserved products when fresh fish is seasonally scarce for vulnerable groups, particularly in fish deficit areas.

#### **6. Testing of a portable low-cost fish drier and promotion of fish powder for young children**

In Myanmar, sun drying is a common method of preserving fish, however, adherence to food safety and quality control practices remains poor which can have long term consequences to human health. Reports suggest that fish processors usually lay fish out for drying on the ground for about 3-5 days during which time it is at risk of contamination by pests, insects, and animals (FAO, MOALI & LIFT 2016).

In other countries, the use of low-cost drier technology in rural communities has been reported to improve food safety and quality of food products (Chua and Chou 2003). And most importantly, it ensures nutrient dense dried fish (animal source food) is available for vulnerable groups and especially during the dry season, when fresh fish is scarce. MYSAP Inland has copied, tested and refined two protocol versions of a Thai portable low-cost fish drier design. Thereafter a third version of the low-cost portable fish drier has been fabricated which is being community tested by a total of 60 households in Kale, Shweba and Kengtung townships.

Complementary to above activity MYSAP Inland will test the production of dried small fish powder by participants who are currently testing the portable fish drier. The MYSAP Inland barrier analysis study found that, the main barrier to feeding fish to young children by caregivers was their fear of children choking on the fish bones (Rizaldo and Weatherson 2018). MYSAP Inland will therefore address this by training women and men to make dried small fish powder using a locally available electric kitchen grinder to reduce dried fish as the main ingredient (dried vegetable leaves may also be added) in a fine powdered dietary supplement.

Fish powder is a nutrient-rich food with multiple essential nutrients. The powder can be added to soft rice (or porridge) and vegetables, such as mashed pumpkin and orange sweet potato, to make a delicious and nutrient-rich complementary food for young children, aged 6 months and above. The dried small fish powder will only be fed to young children after laboratory tests confirm that samples are food safe.

## 7. Strengthening engagement with nutrition stakeholders

The aim is to widely share MYSAP Inland lessons learned, to increase impact, visibility and reinforce the value of fish in improving nutrition, as well as to provide information among stakeholders on the nutrition-sensitive fish agri-food systems approaches being implemented by MYSAP Inland and WorldFish. Moreover, by participating in nutrition and health discussions (such as the SUN Civil Society Alliance, and its Technical Working Group), fish will be placed on the agenda at the policy level, benefiting many rural communities that are heavily reliant on fish as the primary animal-source food in their diets (Youn et al. 2018).



A man and a woman together selling fish in the Kale market, Sagaing Region.

# Notes

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- <sup>1</sup> In this document small indigenous fish species (SIS) are small-sized, self-replicating fish species that are indigenous to rice field systems, streams and rivers in Myanmar. SIS can be cultured in aquaculture ponds. SIS are not juvenile life stages of large-sized fish species.
- <sup>2</sup> Refers to a traditional processed product that is a mixture of fish and boiled rice usually wrapped in a banana leaf.
- <sup>3</sup> SPRING. 2014. Essential nutrition actions and essential hygiene actions: A training guide for Peace Corps health volunteers and Peace Corps staff. The Strengthening Partnerships, Results, and Innovations in Nutrition Globally (SPRING) project. Arlington, VA.
- <sup>4</sup> The DBC framework presents key elements (behaviour, priority group or influencing groups, determinants, bridges to activities, and activities) that help in developing and reviewing a behaviour change strategy.



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