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United Nations Decade of Family Farming 2019-2028: Regional Action Plan to Implement the UNDFP for Achieving the SDGs in South Asia



**United Nations Decade of Family Farming 2019-2028:
Regional Action Plan to Implement the UNDFE for
Achieving the SDGs in South Asia**

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Let us put family farmers at the center of our food systems to lead us to the transformation we need towards a new, more inclusive and sustainable “new normal” for this decade and the ones still to come

– FAO

Value the work of women farmers as they show the nexus between energy, agriculture, food, health and nutrition, water and sanitation

– Chhayaben Bhavsar

Self Employed Womens’ Association, India

Family farmers: feeding the world, caring for the earth

– UNDF joint secretariat (FAO & IFAD)

Foreword



South Asian agriculture is characterized with smallholding and integrated type and primarily operated by family labor, termed as ‘Family Farming’. Family farmers are smallholders, and frequently handicapped with lack of access to inputs (improved seeds, irrigation, equipment, and pesticide), technology dissemination services, and output markets in addition to weak value chains. Considering its immense contribution of family farmers, the United Nations designated 2014 as International Year of Family Farming (IYFF) in order to begin robust activities involving it’s all Members and stakeholders. In view of the significant achievements made during the celebration of ‘IYFF’, on December 2017, the United Nations General Assembly proclaimed 2019-2028 as the UN Decade of Family Farming (UNDF) with defined ‘Global Action Plan’ (GAP).

In order to formulate regional action plan in South Asia after due contemplation to the GAP of UNDF, the SAARC Agriculture Centre (SAC), Bangladesh in collaboration with Asian Farmers’ Association for Sustainable Rural Development (AFA), Philippines, FAO Regional Office for Asia and the Pacific (FAO-RAP), Thailand, and International Cooperative Alliance Asia and Pacific (ICA-AP), India organized the regional expert consultation meeting on 5th and 6th November, 2020 on virtual mode. As an output of the above virtual meeting, this book is being published through synergetic efforts of all partner organizations. This book will be very useful to the researchers, academician, policy makers, development partners towards formulation and execution of national action plan on family farming in SAARC region in order to achieve the targets of SDGs.

I appreciate the SAC, AFA, FAO-RAP, and ICA for their considerable contribution in this endeavor. I acknowledge all the National Focal Point Experts, Pillar Leaders and reviewers for their significant contributions during the meeting.

I would like to express my sincere gratitude to Dr. Rudra Bahadur Shrestha, Senior Program Specialist (Priority Setting and Program Development), SAC; Ms. Estrella Penunia, Secretary General, AFA; Mr. Pierre Ferrand, Agriculture Officer, FAO-RAP; Mr. Mohit Dave, ICA-AP; and Dr. Younus Ali, Senior Technical Officer, SAC for their untiring efforts to publish the book.

Dr. Md. Baktear Hossain

Director

SAARC Agriculture Center, Dhaka, Bangladesh

Foreword



South Asia stands at a crossroad in its development. The region matters to the world in terms of population, market and economy. It is home to 24% of the global population, with the largest youth labor force in the world. 65% of the population resides in rural areas, the majority of which are smallholder family farmers adopting integrated farming systems consisting of agriculture, livestock, forestry, and fisheries (FAO and IFAD, 2019). They produce at least 70% of the foods in the region. Yet, while South Asia is the second fastest growing region economically in the world, it is home to 216 million people living below the international poverty line, and 14.9% of its people suffer from undernourishment.

Family farmers and their organizations (FFOs) are at the heart of the solutions to those challenges. They also hold the potential to accelerate progress toward the achievement of the whole SDG agenda. It is therefore critical to continue encouraging and supporting national level inclusive multi-stakeholder mechanisms to advance family farming. Beyond food production, FFOs provide various, fundamental services for their members such as education, business development, communication, insurance, cultural or health services, childcare and care of the elderly in their communities. They also have played a crucial role during the COVID-19 pandemic, facilitating effective responses, safeguarding their members and delivering alternative services.

The pandemic has placed a spotlight on the need for more resilient and sustainable food systems. FFOs are critical to reach such resilience and must be supported in this acute phase. It is paramount to consider them as key actors and partners in the national recovery plans and processes that are being developed. Processes to re-build and recover from the current crisis provide a unique opportunity to accelerate actions to improve policy frameworks for the support of family farming at national and regional levels – and enhance the implementation of the UN Decade of Family Farming 2019-2028 (UNDF).

This publication, compiling the findings and presentations of the two-day consultation meeting organized on 5-6 November 2020, marks an important milestone in the elaboration of a joint, regional action plan in South Asia for the UNDF. The inclusive process behind the UNDF will be continuously encouraged by FAO, which reiterates its determination and commitment to support concerted actions to fulfil the ambitions of the 2030 Agenda for Sustainable Development, and to step up interventions for healthy, resilient and sustainable food systems.

A handwritten signature in black ink that reads "M Villarreal".

Marcela Villarreal, Ph.D.

Director, Partnerships and UN Collaboration Division, PSU
FAO HQ, Rome, Italy

Foreword



We are pleased to co-publish this book: United Nations Decade of Family Farming 2019-2028: Regional Action Plan to Implement the UNDFP and Achieve the SDGs in South Asia”, together with SAARC Agriculture Center, UN Food and Agricultural Organization and International Cooperative Alliance- Asia and the Pacific.

The chapters in this book were revised versions of the presentations in the event “Regional Consultation Meeting on the UN Decade of Family Farming: Formulating Strategies to Strengthen Smallholder Family Farmers in South Asia”, held last November 5-6, 2020. That meeting gathered representatives from SAARC member states, intergovernmental organizations as well as from civil society, including family farming organizations and cooperatives. As a result of the discussions, the participants committed to pursuing a set of recommended priority policies, actions, studies and researches at national and regional levels, along the seven pillars of the global action plan of the UNDFP. In the joint communique emanating from the meeting, the participants committed to operationalize the UNDFP’s global action plan at the country level through the development and implementation of the National Action Plans, employing inclusive, multi-stakeholder processes, convened by government, with the strong participation of NGOs, farmers organizations, cooperatives, research institutions, and private sector. The participants also committed to finalizing and packaging a regional action plan for UNDFP in South Asia.

Our organization, Asian Farmers Association for Sustainable Rural Development or AFA, an organization of national family farmers organizations, currently with 22 member organizations in 16 countries in Asia and a member of the International Steering Committee of the UNDFP, is committed to accompany and engage SAARC Member States and institutions in these processes for empowering family farmers in South Asia, ensuring their well-being and dignified living conditions, contributing to sustainable and healthy food systems.

U Than Swe

Chairperson

Asian Farmers’ Association for Sustainable Rural Development, the Philippines

Foreword



The SAARC region covers 3% of the world's landmass and represents 24% of world population, making it the region with the highest population density. Around 67% of its population live in rural areas and are primarily dependent on agriculture, fisheries and forestry for a living. Within this, 80% of women are engaged in farm work. Family farmers produce 70% of the food in the region; still, 66% of the world's poor live in rural South Asia. The region has high food and nutrition insecurity and increased vulnerability to climate change and other shocks.

Agricultural co-ops in South Asia can play a key role in eradicating poverty, reducing hunger, and addressing gender inequality. Through joint actions such as bulk buying of inputs, collective marketing, negotiation of credit and contracts, lobbying with policy-makers and building capacity, they help increase the productivity and income of smallholder producers and reduce poverty and hunger. By strengthening existing agricultural co-ops in SAARC countries, progress towards the 2030 Agenda for Sustainable Development can be greatly enhanced.

The UNDDFF Regional Action Plan for South Asia is a progressive step in responding to the challenges thrown by the current pandemic. This inclusive process is endorsed by ICA-AP, which reiterates its determination and commitment to support concerted actions to fulfil the ambitions of the 2030 Agenda, and to step up interventions for a resilient and sustainable cooperative movement in the region. Co-ops are not only contributing to the UNDDFF but are also facilitating effective responses to the pandemic by safeguarding members and delivering alternative services. It is hence important to include co-ops as key actors and partners in the recovery process, and the national recovery plans.

This publication compiling the findings and presentations of the consultation meeting organized in November 2020 is a milestone in developing a regional action plan for the UNDDFF in South Asia. We wholeheartedly thank the participants and representatives of co-ops and farmer organizations from SAARC region who came together to share and learn from each other's experiences in organizing and strengthening family farming.

Mr. Balasubramanian G. Iyer
Regional Director, Asia and Pacific
International Cooperative Alliance

Acknowledgment

The present Volume “United Nations Decade of Family Farming 2019-2028: Regional Action Plan to Implement the UNDFP and Achieve the SDGs in South Asia” is an outcome of a regional virtual consultation meeting on “UN Decade of Family Farming: Formulating Strategies and Action Plan to Strengthen Smallholder Family Farmers in South Asia”, 5-6 November 2020 organized by the SAARC Agriculture Center, Bangladesh in collaboration with Asian Farmers’ Association for Sustainable Rural Development (AFA), Philippines, and the International Cooperative Alliance Asia and Pacific (ICA-AP), India, and the technical assistance of the Food and Agriculture Organization Regional Office for Asia and the Pacific (FAO RAP) Thailand.

This forum was participated by high level dignitaries from the Headquarters of FAO and IFAD, government representatives from SAARC Member States, professionals, experts, academics, researchers and from representatives of Family Farmers, Cooperatives and Civil Society Organizations. We are delighted to publish this Volume, which will be useful to guide the South Asian countries in formulating relevant, implementable policies and strategic actions to empower family farmers so that they will eventually fully contribute to the social, economic, environmental and political prosperity of their respective country.

We would like to express our sincere gratitude to the SAC, AFA, FAO (RAP and HQ), ICA-AP, SAARC Member States, particularly the Ministry of Foreign/ External Affairs and the Ministry of Agriculture, SAARC Secretariat, National Focal Point Experts, UNDFP Pillar Leaders and reviewers for their invaluable contributions in this endeavor.

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Dr. Rudra B. Shrestha SPS (Policy Planning), SAC, Bangladesh	Mr. Pierre Ferrand Agriculture Officer, FAO RAP, Thailand	Ma. Estrella Penunia Secretary General, AFA, The Philippines	Mr. Mohit Dave Program Manager, ICA-AP, India	Dr. Younus Ali STO, SAC, Bangladesh
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Acronyms

ADS	Agriculture Development Strategy
AFA	Asian Farmers' Association for Sustainable Rural Development
Coop	Cooperatives
FAO	Food and Agriculture Organization of the United Nations
FF	Family Farming
FFOs	Family Farmers' organizations
GAP	Global Action Plan
ICA	International Cooperative Alliance
IFAD	International Fund for Agricultural Development
IYFF	International Year of Family Farming
NAP	National Action Plan
NCCF	National Committees on Family Farming
RAP	Regional Action Plan
SAARC	South Asian Association for Regional Cooperation
SAC	SAARC Agriculture Centre
SAR	South Asia Region
SDGs	Sustainable Development Goals
SEWA	Self Employed Women's Association
SHG	Self -Help Groups
UNDF	UN Decade of Family Farming
WRF	World Rural Forum

Highlights of the Book

This book is an output of a regional experts' consultation meeting on "UN Decade of Family Farming: Formulating Strategies and Action Plan to Strengthen Smallholder Family Farmers in South Asia", 5-6 November 2020 organized by SAARC Agriculture Center (SAC), Bangladesh in collaboration with Asian Farmers' Association (AFA), Philippines, and the International Cooperative Alliance Asia and Pacific (ICA-AP), India, and the technical assistance of the Food and Agriculture Organization Regional Office for Asia and the Pacific (FAO RAP) Thailand.

This book is the concrete result of active engagement and participations of SAARC Member States' National Focal Point Experts, invited UNDFE experts, authors, and participants.

This book focuses on- family farming's constraints, challenges, opportunities, and government policies to contribute on attaining the targets of Sustainable Development Goals (SDGs) at country and South Asia regional levels.

The regional action plans are framed with expected outcomes, priority policies, priority actions, indicators, timeframe, and responsible institutions under **Seven Pillars of the UNDFE** customizing in South Asian context: i) Develop an Enabling Policy Environment to Strengthen Family Farming; ii) Transversal- Support Youth and Ensure the Generational Sustainability of Family Farming; iii) Transversal- Promote Gender Equity in Family Farming and the Leadership Role of Rural Women; iv) Strengthen Family Farmers' Organizations and Capacities to Generate Knowledge, Represent Farmers and Provide Inclusive Services in the Urban -Rural Continuum; v) Improve Socio-Economic Inclusion, Resilience and Wellbeing of Family Farmers, Rural Households and Communities; vi) Promote Sustainability of Family Farming for Climate- Resilient Food Systems; and vii) Strengthen the Multi-Dimensionality of Family Farming to Promote Social Innovations Contributing to Territorial Development and Food Systems that Safeguard Biodiversity, Environment and Culture.

This volume is useful for the family farmers and their organizations, researchers, academicians, development professionals, policymakers, governments, international organizations, development partners, and civil societies to synergize efforts and strengthen family farmers to achieving the SDGs in South Asia.

UN Decade of Family Farming: Formulating Strategies and Action Plan to Strengthen Smallholder Family Farmers in South Asia

(5-6 November 2020 virtually)

Joint Communiqué

The South Asia region consisting eight countries (Afghanistan, Bangladesh, Bhutan, India, Maldives, Nepal, Pakistan and Sri Lanka), matters to the world in terms of population, market and economy. It is home to 1.7 Billion people, or 24% of the global population, with the largest youth labor force in the world¹. Of this, 65% of the population resides in rural areas², majority are smallholder family farmers³ adopting integrated farming system consisting of agriculture, livestock, forestry, fisheries (FAO and IFAD, 2019). Family farmers in South Asia produce at least 70% of the foods in the region with women putting in as much from 60-98% of farm work⁴

Yet, while South Asia is the second fastest growing region economically in the world, it is home to 216 Million people living below the international poverty line of US\$1.90/day⁵, and 14.9% of the people suffer from undernourishment in the region⁶. Poverty in South Asia has a rural face. In this region, family farmers encounter challenges, especially low productivity, inadequate access to natural resources, production inputs (including affordable quality seeds and fertilizers, appropriate technologies, financial services, infrastructures) and markets. Other important constraints and hurdles comprise weak involvement of family farmers in decision making and governance processes in the value chains, as well as the impacts of climate change and social and political conflicts. On top of that, 50% of the

¹ https://www.un.org/development/desa/youth/wp-content/uploads/sites/21/2019/08/WYP2019_10-Key-Messages_GZ_8AUG19.pdf

² [https://tradingeconomics.com/south-asia/rural-population-percent-of-total-population-wb-data.html#:~:text=Rural%20population%20\(%25%20of%20total,compiled%20from%20officially%20recognized%20sources.](https://tradingeconomics.com/south-asia/rural-population-percent-of-total-population-wb-data.html#:~:text=Rural%20population%20(%25%20of%20total,compiled%20from%20officially%20recognized%20sources.)

³ FAO defines Family Farming as a means of organizing agricultural, forestry, fisheries, pastoral and aquaculture production that is managed and operated by a family, and is predominantly reliant on the family labor of both women and men. The family and the farm are linked, co-evolve and combine economic, environmental, social and cultural functions.

⁴ <https://www.weforum.org/agenda/2020/07/farming-female-empowerment-agriculture-gender/>

⁵ https://worldbank.github.io/SARMD_guidelines/poverty-measures.html

⁶ <https://www.worldhunger.org/asia-hunger-facts-2018/#:~:text=Southern%20Asia%20has%20the%20highest,of%20the%20hungry%20in%20Asia.>

unemployed in the region are youth who are less and less attracted by agriculture despite its potential for jobs creation. Lastly, the COVID19 pandemic is further exacerbating poverty and hunger; worldwide an estimated 130 million more people will go into chronic hunger and poverty by end of 2020 (FAO,2020).

Member states in South Asia have committed to the achievement of Agenda 2030 or the Sustainable Development Goals, especially the goals of ending hunger and poverty in the region. Family farming holds a strong potential to achieve the goals of ending hunger and poverty. Family farming produce more than 80% of the world's food, and family farmers are custodians of biodiversity and better preserve rural landscapes and well as cultural heritage.

The United Nations has declared 2019-2028 as the UN Decade of Family Farming. The Decade's theme, "Feeding the World, Caring for the Earth," captures the ideas that family farmers are about more than production, they are also about stewardship — stewardship of the soil, seeds, biodiversity and human-animal interactions that make up a family farm. Also, the UN Secretary General has called for a Food Systems Summit in 2021. These two global processes, heightened by the covid 19 pandemic, all present tremendous opportunities for South Asia to build back better, harnessing the potentials of its 1Billion farmers to contribute to the immense task of transforming agriculture into more sustainable, just, nutritious, greener and more resilient food systems that ensure improvement of their livelihoods, well-being and prosperity towards the achievement of the SDGs.

Thus, the SAARC Agriculture Centre (SAC), with co-organizers Asian Farmers Association for Sustainable Rural Development (AFA), and the International Cooperative Alliance-Asia Pacific (ICA-AP), and with technical support from the UN Food and Agriculture Organization (FAO), organized the "Regional Consultation meeting on the UN Decade of Family Farming: Formulating Strategies and Action Plan to Strengthen Smallholder Family Farmers in South Asia". The event aimed at formulating a Regional Action Plan that defines the key priorities, strategies and actions to implement the UNDFP in South Asia and that will facilitate and accelerate the process of developing national action plans through inclusive multi-stakeholder processes, not only putting family farmers at the center but recognizing them as critical partners. This virtual meeting held on November 5-6, 2020, and attended by 150 participants, 20% women, 20% youth, from all SA countries except Afghanistan, from government, family farmers organizations,

cooperatives, academia, experts, professionals, civil society, research institutions and intergovernmental organizations.

During this meeting, government officials presented a situation on family farming in their country, as well as on-going and planned efforts to make a national action plan for the UNDIFF. Firsthand experiences from Family Farmers Organizations from Nepal, India and Sri Lanka in regards to supporting National Family Farmers Committees and multi-stakeholder dialogues were also shared with participants. Break out group discussions were held to identify key priorities in terms of policies, actions and studies/researches that need to be undertaken at the regional level, and which will further support the development and implementation of a Regional Action Plan for UNDIFF, anchored in the UNDIFF Global Action Plan.

As a result of the discussions in the breakout sessions, the participants committed to pursuing the following Priority Policies, Actions, Studies and Researches at national and regional level.

For pillar 1: Develop an Enabling Policy Environment to Strengthen Family Farming

- Gather, harmonize and analyse relevant data, and conduct researches on wider spectrum of Family Farming to inform policymaking, monitoring and evaluation processes.
- Establish an inclusive and effective governance system for policy design and implementation to be focused on access to inputs (for example, improve seeds, fertilizers, irrigation, equipment/mechanization, credits), markets for their products, rural revitalization, and inclusive and sustainable value chain development.
- Reinforce commitment and raising awareness at national and sub-regional level on Family Farming contribution, potential and challenges along with appropriate enabling policies.
- Alignment of existing land and land use policies (e.g. contract farming) with the Voluntary Guidelines on the Responsible Governance of Tenure of Land, Fisheries and Forests in the Context of National Food Security (VGGT) and the CFS Principles for Responsible Investment in Agriculture and Food Systems (RAI).

For pillar 2: Support youth and ensure the generational sustainability of family farming

- Increase engagement of youth in family farming and enhance their role in decision-making.
- Strengthen the capacity of young farmers on adopting innovative technologies and practices interconnecting traditional knowledge with new solutions to increase rural employment opportunities through agro-enterprise development and reduce migration from rural to urban and foreign countries.

For Pillar 3: Promote gender equity in family farming and the leadership role of rural women

- Capacity building and sensitization of policy makers to make use of knowledge, policies and information on gender equality and gender sensitive budgeting- ideally to work regionally on a standard on capacity and competency for policy makers and implementers to make sure there are harmonized mechanisms and tools.
- Promoting meaningful participation and leadership of women through capacity development and awareness raising. Ensuring their participation goes beyond numbers for a quota and that an increase in their participation is not contributing to overburdening women.
- Producing and disseminating synthesis documents and research studies that assess women's situation, needs and contributions to family farming – including at the grassroot levels – and translating them into concrete guidelines and policy and program recommendations. Already existing tools should be assessed for gender-based constraints.
- Strengthen women's contributions and promote gender equity across the value chain of the family farming activities.

For Pillar 4: Strengthen family farmers organizations (FFO) and their capacities to generate knowledge, represent farmers concerns and provide inclusive services in rural areas

- Capacity building and experience sharing for strengthening governance and organizational capacities of FFOs to better serve their members and communities; including giving of awards and incentives to innovative and outstanding Farmers organizations.

- Strengthening FFOs to access and provide farm and non-farm services to their members, implement collective actions and better convey / disseminate / relay the voices of FF through a greater use of ICT.
- Support regional platforms (existing and new ones) to foster experience sharing on inclusive multi-stakeholder dialogues, but also relevant technologies for FF, policies and studies (on agricultural cooperatives, diversity of FFO, smart food and healthy diets).
- Follow through the implementation of the provision of farmer representation in the SAARC Seed Bank and approval and implementation of the SAARC Plan of Action for Cooperation on Matters Relating to Cooperatives.

For Pillar 5: Improve socio-economic inclusion, resilience and well-being of family farmers, rural households and communities

- Promote local species of fishes/forests/native crops/local commodities/local technologies/underutilized crops, aligning with the farmers' cooperatives and link with the markets for the products.
- Creation of emergency funds for weather/disaster/pandemic shocks and social safety net and rehabilitation for disadvantaged groups.
- Promote conservation agriculture, urban horticulture, terrace farming, protected agriculture and vertical farming for youth, women and landless labor.
- Prioritize the effective operation of supply chains during pandemic and other disasters.

For Pillar 6: Promote Sustainability of Family Farming for Climate Resilient Food Systems

- Support sustainable and responsible management of natural resources with increased access to productive assets and services to family farmers.
- Promote sustainable agriculture to support current and future generations' needs and mitigate climate change, including sustainable harness of renewable energy.
- Promote inclusive market environment for family farmers.
- Encouraging involvement of women, youth and their organizations in inclusive, sustainable and efficient value chain development.

- Support the development and strengthening of commodity based multi stakeholder platforms including all value chain actors and local level government representatives.

For Pillar 7: Strengthen the multi-dimensionality of family farming to promote social innovations contributing to territorial development and food systems that safeguard biodiversity, environment and culture

- Develop and scale out smallholder-friendly agro ecological and climate resilient technologies.
- Promote nutrition-sensitive as well as gender-sensitive women-farmer friendly agricultural Intensification and diversification.
- Improve access to resources, technologies, and services especially to women and young farmers.
- Develop policies and increase investment in agriculture and rural infrastructure, and cultural heritage of family farmers.
- Develop rural non- farm opportunities for rural youth and women.
- Develop family farm-controlled mechanisms for managing trade-offs between biodiversity, productivity, sustainability of family farmers.
- Strong national, international collaboration, South-South and triangular collaboration in agricultural research and development.

Lastly, the co-organizers of this meeting committed to finalizing and packaging a Regional Action Plan for UNDFP in South Asia based on the results of this meeting and will be endorsed by SAARC leaders. Within the next two months another multi stakeholder virtual process will be convened to finalize this Plan for endorsement by SAARC leaders.

The participants further committed to operationalize the UNDFP global action plan at the country level, through the development and implementation of National Action Plans, led by inclusive, multi-stakeholder process (governments, farmers organization, civil society, research organizations, cooperatives and private sector). The regional level will institute mechanisms for the formulation, implementation and monitoring of the UNDFP plan both at national and regional level.

The participants called on their governments and international development partners to mobilize resources to support the implementation of South Asia's Regional and National Action plans for the UNDFP.

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Chapter 1

Situation of Family Farming in Bangladesh

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Abstract

Family Farming (FF) is a means of organizing agricultural productions that is managed and operated by a family, and is predominantly reliant on the family labor of both women and men. However, family farmers are handicapped with access to natural, financial, technological and market resources, including inputs, extension services, credit and markets for their products. National action plan contextualized country-specific framework of action for the support of family farming which provides roadmap for progress in the implementation of United Nations Decade of Family Farming (UNDFE) and national stakeholders consolidate and align and re-enforce their actions. The present situation of family farming in Bangladesh, constraints and challenges, existing policies, plans, opportunities have been discussed in this paper. A national action plan of UNDFE proposed for sustainable food production and distribution system and keeping potential resources for future use.

Keywords: Family farming, policies and plans, action plan, Bangladesh

1. Background

Bangladesh has made remarkable progress in its agriculture sector despite decreasing arable land, population growth, and adverse climatic effects (MoF, 2019). In fact, the country has one of the lowest land-person ratios in the world, estimated at 0.088 ha per person (BBS, 2018). The number of agricultural farm households is estimated at 1.66 million, which accounts for 46.61% of total households (BBS, 2019). The agriculture sector contributes 13.31% of GDP (Gross Domestic Product), provides employment for around 40% of the total labor force, and feeds about 164.6 million of its population

(BBS, 2018). Rice production of the country nearly quadrupled from 10 million metric tons (MT) in the 1970s to 36 MT in 2018 coupled with significant production increase in non-rice crops like potato, maize, wheat, vegetables and fruits along with fish and poultry, helping Bangladesh achieve near self-sufficiency in rice production and ensuring food security. This has also been instrumental in raising farm incomes and increasing real agricultural wages, thereby contributing handsomely to rural poverty reduction. Bangladesh ranked 3rd in rice, 7th in mango, 8th in potato and guava, 3rd in inland open water capture production and 5th in world aquaculture production (MoP, 2020).

Family Farming (FF) is a means of organizing agricultural productions that is managed and operated by a family, and is predominantly reliant on the family labor of both women and men (FAO, 2014). Family Farming (including all family-based agricultural activities) is a means of organizing agricultural, forestry, fisheries, pastoral and aquaculture production that is managed and operated by a family, and is predominantly reliant on the family labor of both women and men. Like men, women are involved in crop production as farmers, co-farmers, farm managers, and wage laborers. Labor Force Survey (BBS, 2018) estimated that, by 2016–2017, female-headed households in rural Bangladesh had increased by 13.8%, implying that women are taking more responsibility in farming and household activities. By 2015, women’s participation as agriculture wage laborers had also increased by 11.02% from 3.1% in 2000 due to male out-migration and male participation in non-farm activities (BBS, 2018). In the absence of male members, the women’s role is changing from unpaid family worker to farm manager, a phenomenon termed as the “feminization of agriculture” (Jaim & Hossain, 2011).

The family and the farm are linked, co-evolve and combine economic, environmental, social and cultural functions. Out of 25.35 million rural households, 84% households are small farming families (having 0.05-2.49 acres). They are producing the lion share i.e. nearly 70% of the agricultural production of the country. National Agricultural Census report has said Bangladesh is currently home to 16.5 million farmer families. There are over four million landless farmers, with near 6.8 million farmers cultivating other people’s lands (BBS, 2019). So agriculture is a family business performed both by woman and man through their mutual understandings to satisfy the family needs. In fact, the man used to do all the odd jobs while the critical ones done by the woman. A large majority of the

rural population are smallholder family farmers adopting integrated farming systems consisting of agriculture, forestry, fisheries and aquaculture production, which is managed and operated by a family and predominantly reliant on family labor, both women's and men's and they are efficient in production (FAO & IFAD, 2019). The families and the farms are linked, coevolve and combine economic, environmental, reproductive, social and cultural functions. Out of 570 million agricultural farms across the world, 50 million farms belong to family control, i.e. family farm. In near past the practice of agriculture was in the subsistence level. Now, a huge transformation from subsistence level to commercial upgrading is in progress, not only in Bangladesh but throughout the developing nations. So, nobody prefers to consider agriculture nowadays just for the existence but for the improvement of livelihood also. But the reality is: most of the family farms belong to the developing nations are not much organized. It is surprising to know that 56% of the consumers' daily requirements are coming from the family farm.

To highlight the family farmers in sustainable development and strengthen their empowerment, the United Nations declared the "United Nations Decade of Family Farming (UNDF) for 2019-2028 (FAO & IFAD, 2019). The declaration emphasized that until and unless strengthening the smallholder family farmers' socio-economic conditions, the overall prosperity of the country wouldn't be flourished. As a signatory of the declaration, Bangladesh needs to customize with existing situation, challenges, opportunities, natural phenomena with the declaration along with the Global Action.

2. Constraints and Challenges on Family Farming

The challenges in agriculture for most of the developing nations or middle-income countries like Bangladesh are more or less similar. The per capita arable land is decreasing due to increased use of agricultural land for non-agricultural sectors. The present per capita land is very minimum holding which is not enough to run a farm smoothly. The yields of many of the principal crops have been stagnated. The soil is getting weaker day by day which requires high input-based agriculture resulted more investment which is no more a profitable enterprise. It is quite difficult to maintain the value chain. There is a shortage of agricultural labor due to industrialization. The members of the young generation are reluctant to stay back in the rural area. Most of them prefer the white color job. Therefore, the family farming

though practiced in the rural area is now in a considerable shortage of experienced labor with traditional knowledge. So hiring a professional agricultural labor is a costly deal. Thus, maintenance of a family farm is getting difficult. Moreover, the agriculture sector faces other problems such as raise the productivity and profitability of agricultural commodities, increase resource use efficiency, promote diversity among the agricultural commodities, maintenance of biodiversity, minimize yield gap, develop farmers friendly and climate-smart agricultural technologies, develop and extension of appropriate mechanization, reduce postharvest loss, increase water use efficiency, strengthen rural agricultural marketing system, extension of good agricultural practices, educate the farmer with sound nutrition system, etc.

Bangladesh ranked second in Climate Change Vulnerability Index in 2016 and it will likely suffer more from climate change by 2025 than any other country. Rainfall is expected to increase by 10-15% during monsoon seasons by 2030 and 27% by 2075; rising sea level is expected to inundate 120,000 square km by 2050; 14 percent more of the country may become extremely prone to floods by 2030; cyclones in the Bay of Bengal will occur more frequently due to increasing temperature, and the peak intensity of cyclones may increase by 5-10% (Food Planning and Monitoring Unit [FPMU], 2013). Coastal salinity problems will likely worsen as changing rain patterns reduce the amount of dry season water supply from upstream river sources. Overall, crop production might be reduced by 30% by the end of the century; rice production could fall by 8%, and wheat production by 32% by 2050 (FPMU, 2013). Winter crop production would be seriously hampered due to a warmer and drier environment during non-monsoon seasons, while moisture stress might force farmers to reduce the area under irrigated rice cultivation.

The multi-functionality of family farmers related to their roles within the community and as caretakers of the environment allows for efficient and sustainable use and management of natural resources, such as the conservation and sustainable use of biodiversity, the prevention of soil depletion, water pollution and environmental degradation. It also promotes social inclusion and equity, the preservation/transmission of knowledge and culture, and the provision of ecosystem services and landscape management.

The majority small households in Bangladesh ensure food production, food security and food safety for themselves. So, the best option for Bangladesh is the optimum use of arable land via indigenous methods by smallholder farm

families. Hence ensuring maximum food production and keeping potential resources for future use. More investment to smallholder and marginal farmers is now the strategic policy. However, family farmers are handicapped with access to natural, financial, technological and market resources, including inputs, extension services, credit and markets for their products. As a result, farmers in the country remain to be highest poverty and undernourishment.

3. Existing Policies and Programs for Promoting Family Farming

The vision of the UN Decade of Family Farming plans a world where diverse, healthy and sustainable food and agricultural systems flourish, where resilient rural and urban communities enjoy a high quality of life in dignity, equity, free from hunger and poverty. Family farming is essential to achieve this vision. Sensible policies, programs and regulations considering the needs of present and future generations must protect and expand the agency, inclusion and economic capacity of family farmers putting their diversity at the center of sustainable development and contributing to the Agenda 2030.

3.1 Government Policies

Bangladesh is one of the signatory of the UNDF. Public policies recognize the diversity and complexity of the challenges faced by family farms is the key to end hunger and achieve inclusive food systems. The Government of Bangladesh formulated National Agriculture Policy in 2018 which emphasizes women empowerment, participation of youth in agriculture and integrated farming for food and nutrition security, increased income and improvement of the livelihood. Participation of women in direct and indirect ways in the agricultural sector is universally recognized. The main objective of women's participation in agriculture is to make women as skilled human resources. Future agriculture will be managed by an educated, conscious, knowledgeable, patriotic and energetic youth. Youths need to become partners in all development activities by establishing youth farming clubs, and encouraging them to establish small and medium agricultural enterprises. There are a good number of relevant policies, acts to promote family farming such as National Agriculture Policy 2018, National Agricultural Extension Policy 2020, National Women Development Policy 2011, National Crop & Forest Biodiversity Policy 2012, Integrated Minor Irrigation Policy-2017, National Organic Agriculture Policy 2016, National IPM Policy 2002, Draft National Seed Policy 2018, Underground Water

Management Rules 2018 (draft), Seed Act 2018 & Seed Law 2020, Fertilizer (Management) Act 2018, Pesticides Act 2018, Agriculture Marketing Act 2018, Bangladesh Climate Change Strategy & Action Plan 2009.

3.2 Government Plans

Aligning with the vision at near and far the country plans to eliminate food deficiency and attain self-sufficiency in food production. The Seventh Five Year Plan (2016-2020) focuses on: (1) economic growth and poverty reduction; (2) inclusiveness; and (3) sustainable development resilient to climate change and natural disasters. Within this plan, the government set ambitious targets for poverty reduction (to 18.6%) and reduction of extreme poverty (to 8.9% of the population). The Seventh Five Year Plan aims to accelerate the transformation from semi-subsistence farming to agriculture commercialization through productivity gains, diversification, value addition and agro-processing. The plan supports diversification into higher value-added activities and employment opportunities for surplus agriculture laborers into non-farm activities which are continuing in the Eighth Five Year Plan (2021-2025). The 8th Five Year Plan targeted to reduce moderate poverty from 16.36 to 11.54%, and extreme poverty reduction from 7.57 to 4.78%, Create employment opportunities for youth and most importantly entrepreneur development and address the gap in issues related to nutrition, food security, production sustainability and impact of climate change in agriculture that call cooperation from development partners.

The Master Plan for Agricultural Development in the Southern Region of Bangladesh published in 2013 aims at transferring the Southern delta into a vibrant economy and helps putting the country on the trajectory to middle income status. The objective of the Plan is to provide a road map for integrated agricultural development in the coastal districts of Bangladesh to achieve sustainable food security, poverty reduction and livelihood development for the poor and particularly focuses on, among others: (i) increasing agricultural productivity, (ii) improving water management, (iii) developing climate resilient infrastructure and improving surface water irrigation system in order to achieve enhanced productivity, balanced growth, value chain management, increased employment and improved access to food and nutrition through appropriate institutional arrangement and sustainable resource management. The aspects of sustainable agriculture are well integrated in the Bangladesh Delta Plan (BDP2100). The government has already adopted the Delta Plan and the implementation is underway. The Perspective Plan 2041 will put a strong emphasis on the proper

implementation of the Delta Plan. Next two decades, commercializing of agricultural production would be the highest priority.

3.3 Existing Provisions to Promote Family Farming

Bangladesh government is implementing result-oriented specific programs for sustainable agricultural management. Some of the on-going programs are-integrated farming (My House My Farm), incentives (Tk. 9500 crore) for small & marginal farmers (input incentives), irrigation surcharges reduced to 50% by the Government, post-harvest machinery subsidy by 50% (70% in stress prone area), agriculture loan without mortgage for the small holders, agricultural loans at 4% interest (coping with COVID-19 pandemic), Farmer's Bank Account with Tk.10, establishment of vegetables and fruit village in each Upazila, Agricultural rehabilitation and incentive for disaster affected districts, awareness for safe vegetables and fruit production and training on improved and modern technologies etc.

4. Opportunities for Family Farmers Stakeholders

Though there are number of constraints and challenges in family farming, there are lots of opportunities to engage stakeholders which are as follows:

- Family Farming Bangladesh integrates crops, fishers, livestock, trees, fruits and nuts, etc.
- Bangladesh has the experiences of graduating from rice deficit country to achieve self-sufficiency in cereal production.
- The small piece of land under family farming could be utilized efficiently.
- It makes its member efficient in farm-practices through the traditional practices.
- The biodiversity could only be maintained under the family supervision.
- Viable food systems that are built around family farmers can offer new economic opportunities and attractive employment.
- Increasing rural-urban linkages and synergies through a short food supply chain, which can provide promising solutions to eliminating food loss and waste.
- Supportive policy priority and incentive for small holder farming.

5. National Action Plan of the UNDF in Bangladesh

Table 1. National action plan of the UNDF in Bangladesh

Pillar	Priority Policies	Expected Outcomes	Priority Actions at National Level	Timeframe	Indicators	Responsible Institutions
1. Develop an enabling policy environment to strengthen family farming	Insurance for crops, livestock, fisheries and agroforestry	Access of farmers for crops, livestock and fisheries insurance established	Develop insurance policy for crops, livestock and fisheries	2020-2025	Number of policy developed	Ministry of Agriculture (MoA), Ministry of Fisheries and livestock (MoFL)
2. Support youth and ensure the generational sustainability of family farming	Agri-business and entrepreneur for the youth	Supported to agribusiness and entrepreneurship	Capacity developed and ensured easy access	On-going	Number of agri-business person and entrepreneur	MoA, Ministry of Finance (MoF), Ministry of Youth and Sports (MoYS)
3. Promote gender equity in family farming and the leadership role of rural women	Implementation of existing Agriculture Policy	Women empowered	Congenial environment for the development of women leadership	On-going	Number of women headed farmer	MoA, Ministry of Women and Children Affairs (MoWC)

Pillar	Priority Policies	Expected Outcomes	Priority Actions at National Level	Timeframe	Indicators	Responsible Institutions
4. Strengthen family farmers' organizations and capacities to generate knowledge, represent farmers and provide inclusive services in the urban-rural continuum.	Promoting contract farming through group approach	Strengthened the family farmers group	Advisory service and support to the farmers	2020-2025	Number of contract farmer group	MoA, MoFL
5. Improve socio-economic inclusion, resilience and wellbeing of family farmers, rural households and communities	Social protection for family farmers and strategies for sustainable agriculture	Protect socially and self-sufficient in food	Easy access to credit and market	On-going	Number of protected and solvent farm families	MoA, MoF, Ministry of Local Government and Rural Development (MoLGRD)
6. Promote sustainability of family farming for climate-resilient food systems	Innovation of advance agro-technologies	Secured food system for adapting with climate change	Investment in climate smart technology development	On-going	Number of climate smart agro-technologies	MoA, MoFL, Ministry of Environment, Forest and Climate Change (MoEFCC)

Pillar	Priority Policies	Expected Outcomes	Priority Actions at National Level	Timeframe	Indicators	Responsible Institutions
7. Strengthen the multidimensionality of family farming to promote social innovations contributing to territorial development and food systems that safeguard biodiversity, the environment and culture	Development of biodiversity and safeguard policy	Biodiversity safeguarded	Promote native/resilient breeds and underutilized crops	2020-2028	Number of crop species and breeds promoted	MoA, MoFL, MoEFCC

6. Conclusions and Recommendations

Bangladesh has the experiences of graduating from rice deficit country to achieve self-sufficiency in cereal production with the great contribution of family farming. The majority small households or families in Bangladesh ensure food production, food security and food safety for themselves integrating crops, fishers, livestock, trees, fruits and nuts etc. The small piece of land under family farming could be utilized efficiently. The biodiversity could only be maintained under the family supervision. Viable food systems that are built around family farmers can offer new economic opportunities and attractive employment. Family farming increases rural-urban linkages and synergies through a short food supply chain, which can provide promising solutions to eliminating food loss and waste. So, the best option for Bangladesh is the optimum use of arable land via indigenous methods and also blending with modern ones by smallholder farm families. Hence ensuring maximum food production and keeping potential resources for future use. More investment to smallholder and marginal farmers should be the strategic policy.

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Chapter 2

Situation of Family Farming in Bhutan

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Abstract

Bhutan is a landlocked country with a total area of 38,394 Km² and population of 779,666. Renewable Natural Resources (RNR) sector comprising of Agriculture, Livestock and Forestry sectors is the largest sector providing employment to 51.1% of the population and contributes 17.37% of the national GDP. Only 2.93% of the total land is under cultivation and 70.46% is under forest cover. More than 31% of the total agricultural land is situated on slopes as steep as 50% or more. There are six agro-ecological zones and farming systems in Bhutan are predominantly integrated (agriculture, livestock and forestry) and subsistence oriented with average small land holdings of 2.16 acres per households. Labour shortage, human wildlife conflict, loss of agricultural land to urbanization, inadequate irrigation facilities and small land holdings are some of the constraints in agriculture and livestock farming. Farm machinery hiring services, agriculture land development, national organic flagship program and land use certificate program are some of the important programs pursued by agriculture and livestock sectors for enhancing agricultural production. This paper presents national action plan of Bhutan for family farming.

Keywords: Agro-ecological zones, farming systems, family farming

1. Background

Bhutan is a landlocked country with a total area of 38,394 Km² (MoAF, 2010), and the current population is estimated at 779,666 (NSB, 2017). Bhutanese economy is primarily based on agriculture (Renewable Natural Resources Sector). Renewable Natural Resources (RNR) sector comprising of Agriculture, Livestock and Forestry sectors is the largest sector providing employment to 51.1% of the population (NSB, 2019). RNR sector contributes 17.37% (agriculture 10.64%, livestock 4.29% and forestry 2.44%) of the

national GDP (NSB, 2018). The total number of estimated households in Bhutan is 164,011. Of the total population, 36% are in urban areas and 64% in rural areas (NSB, 2017).

Despite its small size, Bhutan's agro-ecology is diverse with large variation in altitude and micro climatic conditions. There are six agro-ecological zones; wet-subtropical, humid subtropical, dry subtropical, warm temperate, cool temperate and alpine zones with altitude ranging from 150 masl in the south to about 4600 masl in the north (MoA, 2002). The subtropical climate of the southern areas is commonly hot and humid during the monsoon and chilly during winter, with an annual precipitation ranging from 2500mm to more than 5000mm. The temperate zone of the middle mountains and valleys is cold in the winter, balmy in spring, hot in summer and mild in fall, with annual precipitation ranging between 1000mm and 2500mm. The alpine climate of the northern area is cold throughout the year with annual precipitations of 500mm to 1000mm (RGoB, 2016). Rainfall pattern is strongly unimodal, maximum rainfall occurring in July and August. The diverse agro-ecological zones favor production of a wide range of crops.

Only 2.93% of the total land is under cultivation and 70.46% is under forest cover while the rest are shrubs, meadows, built up, non-built up, snow cover, bare areas, water bodies, marshy land and degraded areas (MoAF, 2010). In Bhutan, registered land is classified into nine categories; *chhuzhing* (wetland), *kamzhing* (dryland), land for cash crops, residential land, industrial land, commercial land, recreational land, institutional land and any other category (RGoB, 2007). Farmers cultivate rice and rice-based crops in wetland, vegetables, potatoes, maize, wheat, barley and other cereals in dryland, and fruit crops in the cash crop category. About 71% of the households own land out of which 60% of the households own less than 5 acres (NSB, 2017). The average land holding per household is 2.16 acres.

Agriculture is practiced in the valley and on the hill slopes. More than 31% of the total agricultural land is situated on slopes as steep as 50% or more (MoAF, 2010). Due to the rugged terrain and small land holdings farm mechanization in some parts of Bhutan is a challenge. Majority of the Bhutanese farmers continue to practice self-sustaining, integrated (agriculture, livestock and forestry) and subsistence agricultural production system with small land holdings where farmers grow a variety of crops under different farming practices and rear livestock to meet their household food security. Of the total 164,011 households around 65% of rural

households own cattle. 32% have poultry, (12%) own goats and 16% own other livestock (pigs, horses, sheep, yaks, and buffalo).

Over the centuries, small holder Bhutanese farmers have innovated and adopted multiple cropping system as one of the simple mechanisms to produce more per unit area. It is also a proven coping mechanism for averting risks of crop failures and effect of climate change. Bhutanese farmers continue to practice different forms of multiple cropping practices with different combinations of crops. Types of multiple practices are mainly determined by the environment at large, agro-ecology, types of crops, needs of the farmers, and the degree of risk of crop predation by wild animals, market demand and availability of farm labour. However, rice-based, maize-based and potato-based are the predominant cropping patterns.

Over the last two plan periods, farming in Bhutan has seen a dynamic shift from subsistence oriented to commercialized farming. The major interventions that have triggered this transition process are investments in irrigation and farm roads, electric-fencing to protect crops from wildlife damages, development and promotion of high yielding crop varieties, focused commodity approach and provision of essential support services including market infrastructures. The commodity program-based approach planning and implementation is pursued to consolidate resources, improve coordination mechanism, harmonize strategies, coherence, and focus delivery for maximizing program output and impacts. There are 12 national commodities while only six commodities (Rice, Maize, Fruits & Nuts, Citrus, Potato and Vegetables) have been prioritized for 12 FYP based on their contribution to food security, nutrition, import substitution, export potential, income and employment opportunities. However, remaining six commodities (Wheat and Other Cereals, Oilseed, Grain Legumes and Pulses, Medicinal Aromatic Plants and Species (MAPS), Floriculture and Mushroom) will not be neglected but implemented under normal planning and budgeting system (DoA, 2018).

Bhutan has made remarkable achievements in the agriculture and livestock production over the years. Self-sufficiency level of rice is 46.7%, maize 86%, vegetables 86%, fruits 132% and potato 162% (DoA, 2018). At the end of the 12 five year plan period (2018-2023), the self-sufficiency rates of rice, maize and vegetables are targeted to be increased to 60%, 96% and 100% respectively, an average of 21% increase in the total production volume of agriculture crops. For livestock sector, Bhutan is 100% self-sufficient in egg, 94.95% in dairy milk production, 44.95% in meat (pork, chicken, beef, and

chevon) and 17.62% in fish respectively. Slow growth in meat sector is due to the meat sector due to the social and religious stigma while the slow growth of fishery sector in the country is due to non-availability of feasible land to initiate fish farming. Overall, 97.3% of the households are self-sufficient in food (NSB, 2017).

Farming is broadly classified into three categories in view of labour source; firm or corporate, family business and family farming. In the firm or corporate farm labour is exclusively hired, in family business farming labour is mixed (family and hired workers) while in family farming there is no permanent hired worker and the labour is met from the family. As per the FAO, Family Farming is a means of organizing agricultural, forestry, fisheries, pastoral and aquaculture production which is managed and operated by a family and predominantly reliant on family capital and labour, including both women's and men's (FAO, 2014). In Bhutan, farming predominantly falls under Family Farming since most of the labour is met from the family.

2. Constraints and Challenges on Family Farming

i) Labour Shortage

Labour shortage is featured as one of the top three constraints faced by the farmers. Working age and economically active population in the rural areas are continuously declining due to the rural-urban migration especially youths. Ministry of Agriculture and Forests (MoAF) reported that about 21.4% of the estimated total population were found to be migrants, of which rural to urban migrants represented 18.2% (MoAF, 2014). Thus, aging population are left in the villages and rural areas to continue family farming. This results more economically inactive population within the working group in the rural areas (63%) as compared to 37% in urban areas (NSB, 2019). This translates to higher aging population (65 years and above) in rural areas (9.2%) than in urban areas (3.6%) as reported (NSB, 2017). With more aging population and less economically active population residing in the rural areas, labour shortage will remain as a challenge in the years to come for family farming.

ii) Human Wildlife Conflict

Human wildlife conflict remains to be one of the major challenges for the farmers across the country. Livestock animals and crop predation by wild animals feature frequently in the national television and newspapers. It is

reported that 19.56% of the households face crop damage by wild animals and 0.65% of the households face livestock predation by wild animals (MoAF, 2019). On an average, farmers spend 48 days and 49 nights in a year guarding their crops from wild animals (MoAF, 2017). Despite spending days and nights in the fields guarding their crops, farmers still suffer substantial crop losses every year due to wild animals. This discourages farmers to cultivate crops. One of the reasons for leaving 21.8% of dryland and 3.58% of wetland fallow is reported due to crop predation by wild animals.

iii) Loss of Agricultural Land to Urbanization

Fertile, flat to gentle slope and productive agricultural land is being continuously lost for urbanization and urban infrastructure development. For example, substantial acres of fertile paddy fields in Khuruthang (Punakha), Bajothang (Wangduephodrang) and Thimphu were lost for urban development and replaced with buildings and infrastructures (model towns, schools, highways, hospitals etc.). Urbanization has been pushing agricultural farming to rugged terrain, sloppy hills and unfertile lands that are not preferred for urban development. This has also led the natural pasture and grazing land to decrease in size compromising on the nutritional aspect of bovine livestock. This is eminent from the fact that more than 31% of the total agricultural land in Bhutan is situated on slopes as steep as 50% or more (MoAF, 2010) wherein the land is less productive and prone to land degradation. Risks of losing more productive agricultural land in future is eminent as the preferred site for urban planning and development is on the land with slope less than 30% (MoHS, 2013).

iv) Inadequate Irrigation Facilities

Agricultural farming in Bhutan is predominantly under rain-fed conditions depending on the monsoon rainfall. Due to changing climate and extreme variations in rainfall and temperatures, farming is increasingly becoming unpredictable and difficult to manage. There are 1192 irrigation schemes in the country of which 982 schemes were built by the farmers themselves before the start of the planned development in 1961. From 1961 till 2018 (57 years), the government developed only 210 schemes in the form of new construction or renovation. There has been an inadequate investment on irrigation development so far. Only 18% of the total cultivated land is under irrigation while the remaining area depends on monsoon rain. Adequate investment is necessary for enhancing production, household food self-sufficiency and national food security.

v) Small Landholding Size

The agricultural farming in Bhutan is a small holder family farming with an average land holding per household of 2.16 acres. The land inheritance law causes fragmentation of the already small land holdings and further shrinking the size of land holding. The shrinkage of landholding size of the farmers poses a challenge in achieving the economies of scale in agriculture and livestock operations. Further, it becomes difficult for farm mechanization.

vi) High Feed Cost

Instable feed prices which fluctuates at the whims of monopoly feed millers in the country has affected the timely availability of livestock feeds for smallholder farmers. The irregular escalation of prices is mainly attributed to high import costs of feed ingredients, which in turn results into high production cost. Owing to this reason, establishment of feed mills in the country was considered to be not a good business.

3. Existing Policies and Programs for Promoting Family Farming

The overall agriculture and livestock sectors development is guided by the following policies, acts, rules and regulations:

- Food and Nutrition Security Policy of the Kingdom of Bhutan 2014.
- Economic Development Policy 2016.
- National Irrigation Policy 2012.
- Land Act of Bhutan 2007.
- Livestock Act of Bhutan 2001.
- Seed Act of Bhutan 2000.
- National Framework for Organic Farming in Bhutan 2006.
- Cost Sharing Mechanism for the RNR Sector 2019.
- Agriculture Land Development Guidelines 2017.
- Land rules and regulations of the Kingdom of Bhutan 2007.
- Land Lease Rules and Regulations 2018.
- Seed rules and regulations of Bhutan 2018.
- Guidelines for Farm Road Development 2019.
- DoA 12 FYP 2018-2023 and DoL 12 Five Year Plan 2018-2023.

Some of the broad strategies and programs pursued by the Government of Bhutan to support smallholder family farming are as follows:

i) Farm Machinery Hiring Services Program

Agriculture Machinery Centre (AMC) started hiring services of farm machineries in Sarpang *Dzongkhag* (District) in the southern Bhutan as a pilot site on a cost sharing basis in 2006 to reduce farm labor shortage, enhance the efficiency of farming and upscale agricultural production. Gradually, the hiring services program expanded and covered remaining districts by 2016. To enhance the efficiency of hiring services and expand the area under farm mechanization, Farm Machinery Corporation Limited (FMCL) was established in 2016 and complete fleets of farm machineries were handed over by the government to FMCL. From 2016 onwards, the hiring services and the commercial activities were handed over to FMCL. Types of farm machineries under hiring services includes power tiller, tractor (above 34 HP, 34 HP, 18 HP), paddy reaper, combine harvester, paddy transplanter, water pump and mini tiller. Depending on the type of farm machineries, government provides 14.79% to 63.69% of the farm machinery hiring charges for the benefit of the farmers. There are two models of hiring services; the central hiring and *Geog* (Block) hiring respectively at present which are both under the supervision of FMCL. The central hiring service is directly implemented by FMCL from their premises around the country. On the other hand, the *Geog* hiring service is implemented by Agriculture Extension Officers based in the *Geog* under the supervision of the FMCL.

ii) Agriculture Land Development Program

Agriculture Land Development (ALD) program is initiated and promoted to reduce land degradation, make the existing land more productive, make more feasible for farm mechanization, reduce fallow land, address farm feminization and for sustainable management of land. Sustainable ALD program is also expected to directly contribute to achieving land degradation neutrality (LDN), national food and nutritional security, and poverty alleviation in the country. ALD is defined as the sustainable development of arable land, through change in landform for enhanced agriculture production and continuous agro-ecosystem services. ALD program includes eight technologies: bench terracing, consolidation of existing small terraces, orchard terracing, removal of surface stones from agriculture fields, contour stone bunds, orchard basin, alley cropping and check dam (DoA, 2017). It is a socially inclusive program targeted to benefit all sections of farming community promoted through cost sharing mechanisms, government

supporting machineries, fuel and technical services while beneficiaries provide labour support. In the 12 Five Year Plan (2018-2023), 5339 acres of fallow land is targeted to be brought under cultivation and 10,000 acres of agriculture land to be developed through ALD program.

iii) National Organic Flagship Program

The Bhutanese agriculture continues to be highly integrated that sustains the health of soils, ecological processes, biodiversity, and nutrient cycle to produce food with low or no use of agrochemicals. Only 37% of the farmers in Bhutan use agro-chemicals in about 19% of the cultivated land, which implies 162,000 acres of cropped area is chemical free (ICIMOD, 2017) making it principally organic. In realizing the aspiration of Bhutan as a country with environmentally clean food production systems, the MoAF started National Organic Program in 2006 and also launched the framework for organic farming in 2006 to take forward organic program. Till now, Bhutan has ten products certified as organic; potato, garlic, carrot, turmeric, sea buckthorn, chamomile, mint, *Camellia sinensis*, rhododendron anthopogon, and lemongrass.

iv) Land Use Certificate Program

Land Use Certificate (LUC) Program started in the six eastern *Dzongkhags* of the country in 2017 as an initiative under the Peoples Project. LUC is implemented by the local government; *Dzongkhag*, *Dungkhag* (sub district) and *Geog* administration with technical assistance from the MoAF agencies and sectors in the *Dzongkhag* and region. The program provides user right of an identified state land to a group of unemployed youths for commercial farming. There are 11 youth groups spread over six *Dzongkhags* in the eastern region; Lhuentse, Mongar, Tashiyangtse, Trashigang, Pemagatshel and Samdrupjongkhar. All the youth groups under LUC were established with 100 % financial and technical support from the government and development projects including stipend support for the initial year. The youth projects were designed to gradually sustain themselves through production and income generation. Government has also facilitated in availing loans under Priority Sector Lending from financial institutions and linking youth groups with Bhutan Agro Industry with equity injection to ensure their market. Youth groups under LUC are undertaking commercial farming in pine apple, winter chilli, vegetables, mushroom, kiwi, avocado, passion fruit, poultry, piggery, fishery and dairy. A total of 109 acres of land was allotted to 157 youths.

v) Production Cluster Development (Promote Cluster Village Approach)

Smallholder livestock farmers or producers in the proximity of each other in the village clusters, venturing into same kind of livestock farming to be registered into groups or cooperatives to efficiently use post-production and marketing facilities. This approach shall enable efficient utilization of available resources for a common purpose to upscale the production volume.

vi) Strengthen and Formalize the Livestock Value Chains

In order to enhance the efficiency of production processes and quality of products, it is important to formalize and make more transparent both the horizontal relationships among smallholder livestock farmers in the same value chain segment, such as among the different groups of farmers who sell to a single cooperative, and the vertical relationships between actors in different value chain segments, such as between smallholder farmers, processors and markets.

vii) Enhance Technological Advancement in Livestock Production for Smallholder Livestock Farmers

With the introduction of awareness campaigns and sensitization programs, many smallholder farmers adapted improved livestock technologies and management practices which have positively impacted them to boost production and their income. With the institutionalization of Groups and Cooperatives, the farmers are more organized to produce livestock products such as meat, dairy products, eggs, and fish large volume.

viii) Linking the Smallholder Subsistence Farmers to Assured Market

With the institution of Bhutan Livestock Development Corporation (BLDCL), post-harvest (aggregation and accumulation of livestock products), post-production and marketing supports are provided to the farmers operating under the contract farming system to assure promised markets for the livestock produce. BLDCL also focuses on diversification of livestock products and currently produces products such as processed chicken and beef, Ham and Bacon, and Sausages in the high-end hotels and sales outlets.

4. National Action Plan of the UNDF in Bhutan

Acreage and number of farming population decreases over the years. Educated youths find farming as drudgery and less attractive. Thus, youths

migrate to the urban areas while aging and economically inactive population are left in the villages to continue farming. In order to make the family farming productive, profitable, prestigious, attractive and sustainable, it is crucial to have enabling policies, programs and action plans in place. Crop and livestock insurance policy, efficient delivery of agriculture services, farm feminization, generation of technologies that can adapt to climate change, promotion of climate smart agriculture and livestock technologies, youth engagement, and capacity development are some of the critical policies and programs that would encourage and contribute in promoting family farming.

Table 1. National action plan of UNDF in Bhutan

Pillar	Priority Policies	Expected Outcomes	Priority Actions at National Level	Indicators	Time Frame	Responsible Institutions
1. Develop an Enabling Policy Environment to Strengthen Family Farming.	Enabling policies/schemes for farmer's access to crops and livestock insurance	Crop and livestock insurance scheme implemented	Develop crop and livestock insurance scheme	Number of schemes developed	2020-2023	DoA/DoL
2. Support youth and ensure the generational sustainability of family farming	Land Use Certificate guidelines.	Youth groups engaged in farming enhanced.	Establish functional youth groups in farming.	Number of youth groups.	2020-2023	DoA/DoL
	Youth farmers capacity building program.	Capacity of the youth/youth groups engaged in farming enhanced.	Provide trainings on modern agriculture and livestock farming to youth groups.	Number of youth groups.	2020-2023	DoA/DoL
3. Promote gender equity in family farming and the leadership role of rural women.	Farm feminization program and plans.	Gender friendly farm machineries and technologies promoted.	Generate gender friendly technologies.	Number of gender friendly technologies.	2020-2023	DoA/DoL

Pillar	Priority Policies	Expected Outcomes	Priority Actions at National Level	Indicators	Time Frame	Responsible Institutions
4. Strengthen family farmers organizations and their capacities to generate knowledge, represent farmers concerns and provide inclusive services in rural areas.	Efficient and effective delivery of services to farmers.	Functional Agromet Decision Support Services (ADSS) established.	Provide ADSS in pilot districts.	Number of pilot districts/sites.	2020-2023	DoA
	Capacity building programs.	Farmers' capacity on agriculture and livestock family farming strengthened.	Provide capacity building programs of farmers and farmers' groups.	Number of farmers and farmers groups.	2020-2023	DoA/DoL
5. Improve socio-economic inclusion, resilience and well-being of family farmers.	Nutrition model garden program.	Nutrition model garden guideline.	Promote model nutrition garden.	Number of model nutrition garden.	2020-2023	DoA
	Relief fund for weather/climate disasters.	Support for farmers on weather/climate disasters established.	Development of RNR endowment scheme initiated.	Endowment fund scheme implementation status.	2020-2023	DoA/DoL/MoAF
	Public awareness campaign.	Public awareness on food for health created.	Develop public awareness materials on food for health.	Number of materials developed.	2020-2023	DoA/DoL/MoAF

Pillar	Priority Policies	Expected Outcomes	Priority Actions at National Level	Indicators	Time Frame	Responsible Institutions
6. Promote Sustainability of Family Farming for Climate Resilient Food Systems.	Climate change research program.	Climate resilient technologies developed.	Conduct research on climate change.	Number of technologies generated.	2020-2023	DoA
	Climate resilient agriculture technology promotional program.	Climate resilient agriculture technologies promoted.	Promote climate resilient technologies.	Number of technologies.	2020-2023	DoA
	Climate resilient livestock technology promotional program.	Climate resilient livestock technologies promoted.	Promote climate resilient technologies such as biogas and stall feeding.	Number of biogas and stall feeding.	2020-2023	DoL
7. Strengthen the Multi-Dimensionality of Family Farming.	Native livestock and underutilized crops utilization and promotional program.	Underutilized crops production enhanced and native livestock breeds promoted.	Promote native livestock breeds and underutilized crops	Number of crop species and breeds promoted, quantity produced	2020-2023	DoA/DoL
	National Organic Program.	Agriculture and livestock organic products produced.	Produce crops and livestock products under organic condition.	Quantity of organic products produced.	2020-2023	DoA/DoL

5. Conclusions and Recommendations

RNR sector continues to play important role for food self-sufficiency, national food security and economic development contributing 17.37% to the national GDP. It is the largest sector providing employment to 51.1% of the population. Demand for more foods increases with increasing urban population. The increasing trend of rural to urban migration, youths preferring to move to the urban areas, dwindling and aging farming population in the villages, it is perceived that more and more pressure for food production will fall on the farming communities. It is imperative to have enabling and appropriate policies, crop and livestock insurance schemes, farmer friendly credit facilities, subsidies, minimum support price, efficient and effective delivery of RNR services, technologies to protect crops from wild animals, irrigation infrastructure and functional farm roads for sustainable food production and farming. Climate resilient technologies, farm mechanization, gender friendly technologies, ICT/digital agriculture, protected agriculture, etc. are some of the options that could change the perception of youths on agriculture as low job, manual and drudgery, and encourage youths for farming.

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Chapter 3

Situation of Family Farming in India

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Abstract

India accounts for 93 million small farms (23% of world). Both women and men are engaged in family farming and produce 70% of food and generate food and income for hundreds of millions of rural people, both within the family farms and in related enterprises. In India, contribution of small farmers to total farm output exceeds 50%, while they cultivate 44% of land. The holding sizes of marginal farms have decreased from the level of 0.40 ha in 1970-71 to 0.38 ha. Further reduction is also expected due to fragmentation. Diversification of existing farming systems with change in crop (s), cropping systems, addition and improvement of livestock components, inclusion of horticulture, kitchen garden, primary and secondary processing, boundary plantations are essential to improve the on-farm income of marginal holders in India. This also can help for meeting household level balanced food, recycling of nutrients and water besides increasing the employment for family. Resource saving of 40 to 50 % can be ensured besides enhancing the income of household to the level of at least Rs. 400 to 500/day through integrated farming systems. National priorities and policies for supporting family farms include creation of clusters, farmer producer organizations and social empowerment through schemes such as women farmers entrepreneurship, Agri-startups etc. It is essential to include land ownership by women as major agenda and credit access to family farmers including absentee farming households are critical in achieving the seven pillars of family farming as envisioned by UN.

Keywords: Family farming, marginal holders, farming systems, sustainability

1. Background

Around 13 million agricultural workers have moved to off farm activities during the period of 2009-2012. Family farming assumes great importance for conservation as well as cultivation in the context of costlier and reduced labour availability which happens mainly due to shift of agricultural workers to non-agricultural activities. Family Farming is a means of organizing agricultural, forestry, fisheries, pastoral, and aquaculture production which is managed and operated by a family and predominantly reliant on non-wage family labour, including both women's and men. The family and the farm are linked, co-evolve, and combine economic, environmental, reproductive, social, and cultural functions. Whole families run the farms and a typical family farm is up to one hectare in size.

Diversity is the key strategy adopted by family farms in India. These farms can contribute significantly for reducing the malnutrition in the country by way growing multiple crops such as cereals, pulses, oilseeds, vegetables *etc* unlike large farms who mainly focus on single commodity or the cereal-cereal intensive systems. From the time of preparing the land, sowing, raising of crops, intercultural operations, small scale processing and value addition, the labour involved in family farms are shared equally by men and women. Weeding is mostly done by women farmers and landless women from neighboring areas also contribute in this to ear for their livelihood.

Major ecological as well as socio-economic benefit associated with family farming comes from the inclusion of farm animals for milk, eggs, meat, and draught. Women take up much of the work such as managing feeds for the animals, milking the cows, collecting urine and dung for making manure and/or 'green' fuels for cooking. The dried cow dung is used as fuel for cooking. In a more advanced system, 'cooking gas' is produced from cow dung in the form of biogas which is environment friendly way of farming. All these different aspects of work associated with family farming have pro-nature, pro-poor, pro-women, pro-livelihood, and pro-renewable energy dimensions. The crops-plus-animals-based agro-systems are still prevalent in more than 86% of farm households in India, although threats to these highly sustainable family farming systems are increasing in scale and intensity

While agriculture in any form is not entirely benign to the environment, family farming practiced in India is certainly in greater harmony with the natural ecosystems. The family farms include cultivation of nitrogen-fixing leguminous crops, crop rotations which help in managing pests.

Conservation of biodiversity reduces eradication of species to greater extent. Family farming that has several principles and practices in common with the evergreen revolution should have all the technological, financial, policy and market support so that the food and nutrition security can be maintained. Role of family farming that has all the ingredients and farming principles of the evergreen revolution are the best option to achieve 'zero hunger' that includes the hidden hunger as well (Kesavan & Swaminathan, 2014).

2. Constraints and Challenges on Family Farming

2.1 Status of Family Farming

2.1.1 Limited land

Seventy per cent of the world small farms are in China and India. Out of the 404 million small farms in the world, China, and India alone account for 193 (47%) and 93 million (23%) small farms, respectively. The women and men engaged in family farming produce 70% of world's food and generate food and income for hundreds of millions of rural people, both within the family farms and in related enterprises. In India, contribution of small farmers to total farm output exceeds 50%, while they cultivate 44% of land. The holding sizes of marginal farms have decreased from the level of 0.40 ha in 1970-71 to 0.38 ha in 2010-11 (Fig 1) and likely to reduce to the level of 0.32 ha within this decade. By virtue of increased number of operational holdings (mainly due to fragmentation), their size is small but can be made bountiful by appropriate policy interventions. In India, it has been widely reported and accepted that farm size has inverse relationship with productivity and income. Small farms are more diversified in nature. Out of 92 million farm households falling under marginal farm category having <1 ha as operational holding size, 70% of the farmers are having the area of below 0.5 ha (Fig 2). The average size of marginal holdings varies from 0.13 ha in Kerala to 0.61 ha in Punjab with only 8 states having the mean holding size of >0.50 ha. Marginal farmers are the ones who have lesser capital but higher use of labour and other family-owned inputs, and usually have a higher index of cropping intensity and diversification. Although, small holders have higher productivity compared to large size holdings, the main problem with small holders is low marketable surplus and profit despite the low expenditure on external labour costs.

Realizing the important contributions that family farming is making towards food security and eradicating poverty, the year 2014 has been declared as the 'international year of family farming' (IYFF) at the 66th session of the united

nations general assembly. The IYFF aims at promoting international awareness, builds on existing country and/or regionally led Initiatives and strengthens contribution of family farmers and smallholders for sustainable development.

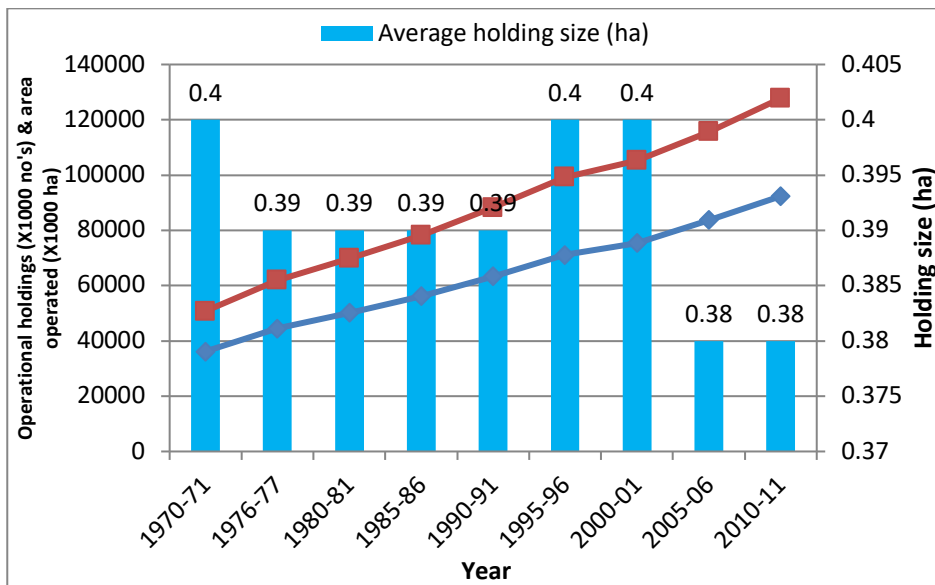


Fig 1. Change in holding size, operational holdings and area of marginal farm households in India (Source: Agricultural Census, 2010-11)

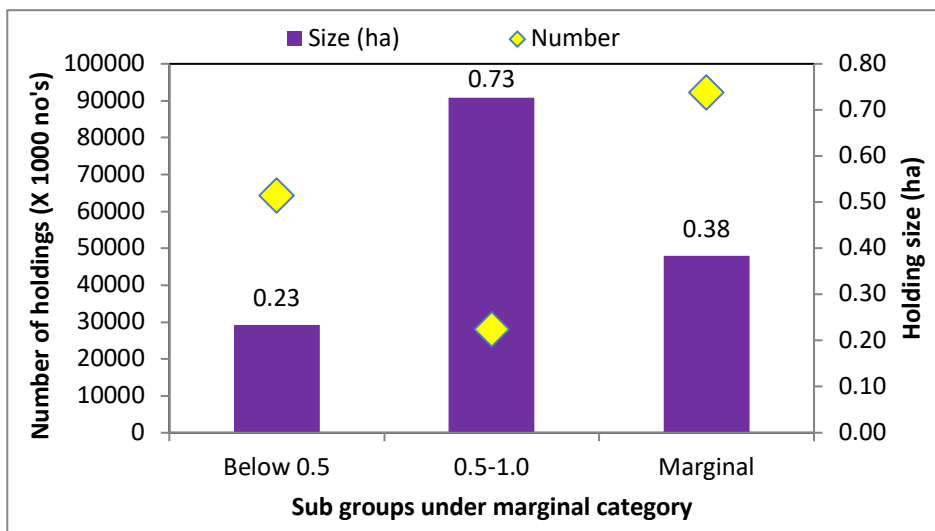


Fig 2. Number of operational holdings and mean holding size of farms with an area of below 0.5 ha and 0.5 to 1 ha in India (Source: Agricultural Census, 2010-11)

2.1.2 Challenge in managing diversity

In India, crop + livestock is the pre-dominant farming system and around 85 % of farm households practice it. Although, the natural integration components exist, it lacks much needed recycling within the farm for reducing external dependence on market. Under on-farm research component of AICRP on Integrated Farming Systems, performance of existing farming systems in 732 marginal households in the country was taken up in 30 districts in 20 states and it clearly reveals that existence of 35 types of farming systems with components as high as 5. Out of the sample surveyed and subgroup of crop+ livestock system, crop + dairy is the major system practiced by 48% of marginal holders followed by crop + dairy + goat (11%). The Table 1 indicates that among the livestock category, dairy is practiced by 86 % marginal holders followed by goat (24%) and poultry (21%). The other components such as fish, fruits, apiary, sheep etc. are location specific.

Table 1. Farming system component presence in the marginal households

Component	% of Households Having the Component
Crop	99
Dairy	86
Goat	24
Poultry	21

Further analysis of number of enterprises present in the farming system indicates, 52% households are having two (example crop + dairy), 28% farm households are having 3 (example crop + dairy + goat) and 11% households are having 4 (example crop + dairy + goat + fish). Around 7 % households are having the single enterprise (either crop or dairy alone) (Fig 3).

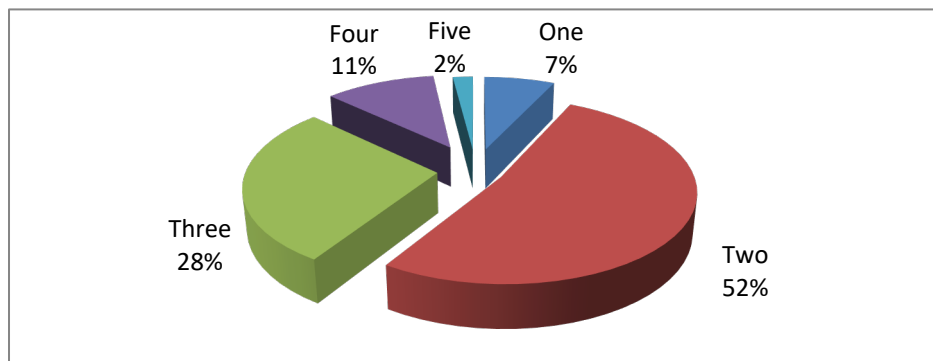


Fig 3. Number of farming system enterprises practiced by marginal households (Benchmark data of OFR experiment 2 under AICRP on IFS)

The contribution of crop and livestock to gross income of marginal households in various NARP zones indicates that in majority of the place crop component contributes >50 % while at few districts such as Samba (Jammu), Aurangabad (Maharashtra), Mehsana and Panchmahal (Gujarat), livestock component contributes either equally or more (Fig 4).

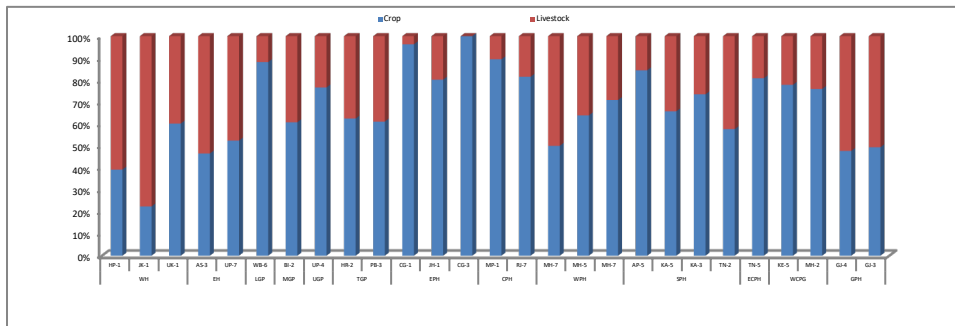


Fig 4. Per cent contribution of crop and livestock components to gross income of marginal households in various NARP zones (Benchmark data of OFR experiment under AICRP on IFS)

2.1.3 Challenge of engaging manpower in farming

The study conducted through on-farm centres reveals that marginal households are having the effective field workable persons of 3 to 4 as the family size is up to 7 with mean family size of 5. Even when bare minimum of 3 persons/household is considered, 1095 man/women days (8 hrs. in a day) is available per household which is sufficient to take up the farming in the tiny holdings. Hence, marginal farms offer greater scope for agricultural diversification.

3. Existing Policies and Programs for Family Farming

3.1 Farming System Research for Family Farms

The philosophy behind shifting from cropping system to the farming system mode involves: i) in situ recycling of organic residues including farm wastes generated at the farm to reduce the dependency on market inputs; ii) decrease in cost of cultivation through enhanced input use efficiency; iii) effective use of bye-products/wastes of one component for the benefit of other components to generate additional income; iv) upgrading of soil, water quality and bio-diversity; v) increased water productivity; vi) nutritional security; and vii) environmental improvement by moderating flow of greenhouse gases from the soil to environment (Ravisankar et al., 2006).

A typical Integrated Farming System (IFS) prototype design involves integration of location and societal specific modules such as cropping systems including fodder, fruit orchards intercropped with vegetables/fodder, dairy, goatary, poultry, piggery, aquaculture, mushroom, apiary, bio-gas, sericulture, roof-top gardening, compost yards, kitchen garden, boundary/bund plantation, agro-forestry, horti-pasture, small scale processing and value addition of marketable surplus produces. These modules can be selected by the farmers based on the resource availability such as land, labour and capital available for investment. Agro-ecology specific development and implementation of IFS are essential due to diverse nature of climate, soil, crops, length of growing period, livestock, social preferences, availability of resources and support in India.

Prototype IFS models: Tailor-made prototype IFS models established by Indian Council of Agricultural Research through Indian Institute of Farming Systems Research at 30 State Agricultural Universities, 9 ICAR institutes and 1 Central University have the potential to increase the income by 3 to 5 times than existing systems/practices of farmers in a period of 3 to 4 years (Panwar et al., 2019; Singh et al., 2006).

Low-cost IFS models: Five modules of IFS comprising of *cropping systems diversification* (most efficient cropping systems keeping in view of the farmers resources, perception, willingness, market and requirement other components in the system), **Livestock diversification** [(Mineral mixture + deworming+ round the year fodder supply for existing components and introduction of location specific new livestock components viz., backyard poultry, duckery, piggery, goat etc)], *Product diversification / Processing* (Preparation of mineral mixture/value addition of market surplus products/Kitchen /roof gardening) and *Optional* (introduction of new components such as mushroom, apiary, boundary plantation) and *Capacity building* (Training of farm households on farming systems including post-harvest and value addition) were implemented in marginal and small farmers household in participatory mode to enhance the food, nutrition and environment besides doubling of farm income.

3.2 Key Actions Being Implemented for Successful IFS

Diversity: Maintaining diversity is essential to achieve all the direct and indirect benefits of meeting the household level food, nutrition for human, livestock and soil besides enhancing the income and other complementary benefits. Across the prototype IFS models developed, the diversity of crops (count of crops) is found to be cereals (19%), millets (4%), pulses (15%),

oilseeds (7%), fodder (15%), vegetables (15%), fruits (18%) and flowers (7%). The diversity also helps to improve the biological nitrogen fixation to the tune of 119 kg/ha by growing green manures, leguminous plants including pulses and vegetables, nitrogen fixing leguminous trees *etc.*

Recycling: Recycling of wastes from one module to another module is very essential to ensure sustainability and to reduce external dependence for inputs. This is overly critical for IFS as recycling and preservation of biodiversity is the core concepts on which all the modules are integrated. Recycling can be of through various modules such as composts, vermi composts *etc.* and practices such as crop residue mulching. IFS model should recycle at least 30 % of total value of inputs within the system.

Aggregation and Value addition: Due to the diversified nature of IFS farms, the marketable surplus produce from individual household shall be lower. Therefore, aggregation and small-scale processing such as preparation of value-added products such as multi-grain flour, jam, jelly, pickles, oils, powders *etc.* plays a vital role in collection of produces at the cluster level for small scale processing. Mobilization of rural youth for aggregation (Uber model) and marketing at local level can be encouraged. During 2020-21, around 10,000 FPOs are proposed to be created by the Government out of which some FPOs can be identified and promoted as IFS FPOs to produce, aggregate and market. Entrepreneurs and Startups can also be encouraged for processing, branding and marketing at national and international level.

3.3 Success Story of Doubling the Income of Marginal Households

Shri Keshab Jena having the family of 6 members (3 adults and 3 childrens) was deriving livelihood from the 0.70 ha area (Latitude 20° 32'090' N, Longitude 86°17'586' E) located in village Darabal, block Derabis (85 km from Bhubaneswar) in Kendrapara district of Odisha. The annual rainfall of the region is 1500 mm with maximum area under rice-fallow. However, Shri Keshab Jena tried to grow greengram, blackgram, jute and some vegetables like brinjal, bittergourd and tomato after the rice in order to get sufficient income to run his family. Besides these, he was also having a mango plant, one desi cow, two bullocks and four goats. The milk yield of cow was only < 2 litres/day. One small pond of 320 m² was present in his farm from which he was harvesting only 10 kg of local species of fish. In general, the productivity of all crops, animals and fish was very low compared to standards. The net income obtained from marketable surplus of all the components was only Rs 17600/year from which his family was thriving.

The total cost of interventions in all the modules was only Rs 8700/year which contributed for additional income of Rs 25000/year. Within one year, the net return per rupee invested on interventions stands at 1.87. The household earns net income of Rs 33900/year which is 92% higher than benchmark. Besides the higher income, the family meets the nutritional requirement by in house production of quality products such as pulses, milk, egg, mushroom, and fish.

3.4. Programmes and Implementation

Few states have initiated the promotion of IFS models through formulation of schemes converging the central sector and centrally sponsored schemes. During the period of 2017-20, three states namely Jammu and Kashmir, Kerala and Tamil Nadu have promoted the IFS models developed by ICAR-IIFSR, AICRP on IFS and AI-NPOF programmes with a financial outlay of 126.76 crores (Panwar *et al.*, 2019).

Kerala: *Rebuild Kerala development programme* (Establishment of IFS models project) to establish 7040 IFS models in various panchayats.

Tamil Nadu: Promoted the IFS models in 34 districts involving 10,090 farmers under *Integrated Farming Systems scheme* designed from several Central Sector and Centrally Sponsored schemes such as NMSA, RAD.

Jammu and Kashmir: IFS models developed for Jammu was also included under action plan of UT administration for establishing in 84 Assembly Constituencies of Jammu and Kashmir.

DAC&FW of Ministry of Agriculture, GoI also asked all the State Governments to include these IFS /IOFS models in the action plan of Rainfed Farming Systems programme and National Mission on Sustainable Agriculture for promotion at large scale. A webinar was organized during May to June 2020 in which IFS and IOFS models developed for various States and UTs and have been shared with DAC&FW and respective States for scaling-up.

3.5 Convergence of Schemes for Scaling-Up

Different modules of Integrated Farming Systems can be scaled up by leveraging the Centrally Sponsored and Central Sector Schemes of Ministry of Agriculture and Farmers Welfare, Ministry of Fisheries, Animal Husbandry & Dairying and Ministry of Rural development. The list of schemes of different ministries and its components are given below for convergence and implementation to harness the benefits of IFS by marginal, small and under privileged farm households in rural areas.

4. National Action Plan of the UNDF in India

National action plan to achieve the seven pillars include right to land ownership for women and absentee farming households and credit access under enabling policy environment to strengthen the family farming. This will result in integrated development of family farms and contribute significantly for improved quality of life. Youth needs to be attracted to farming which is possible through the development of bankable integrated farming systems for family farms. Development and promotion of women based ergonomic small farm equipment can help for gender empowerment among family farms. The schemes such as setting up of farmer producer organizations, self-help groups and farmer interest groups is helping the family farms to an organization and supporting for value addition and empowerment in terms of access to credit and resources. The fifth, sixth and seventh pillars are being addressed through development of climate resilient villages, integrated farming systems and social welfare schemes (Table 2). A well-organized institution of Government of India including Agricultural Technology Application Research Institutions, Farm Science Centres and other institutions and Ministries are involved in achieving and contributing for development of family farms in India.

Table 2. National Action Plan of the UNDF in India

Pillar	Priority Policies	Expected Outcomes	Priority Actions at National Level	Indicators	Time Frame	Responsible Institutions
1. Develop an Enabling Policy Environment to Strengthen Family Farming.	<ul style="list-style-type: none"> ▪ Right to land ownership for women and absentee farming family households ▪ Credit access policy for marginal households to create capital wealth ▪ Societal development through the community centric farming policies ▪ Market access through electronic mode 	Improved quality of life	Integrated development of marginal holders through policy, technological and innovative interventions	% improvement in Sustainable Livelihood Security Index and Human development index	5 years	11 Agricultural Technology Application Research Institutes (ATARIs) with 721 Krishi Vigyan Kendra (KVKs)
2. Support youth and ensure the generational sustainability of family farming	<ul style="list-style-type: none"> ▪ Bankable integrated farming system models ▪ Lowcost farmer centric and family participatory IFS models ▪ Diversification of rural enterprises 	Attracting rural and educated youth to farming	ARYA, FARMER FIRST	% of rural and educated youth attracted	3 years	11 ATARIs with 721 KVKs across country
3. Promote gender equity in family farming and the leadership role of rural women.	<ul style="list-style-type: none"> ▪ Design and development of women friendly tools and equipments ▪ Mahila Kisan Sashkitikaran Pariyojna (MKSP), Women centric startups in rural areas. 	Empowerment of women.	Development of gender sensitive farming systems and practices.	Improvement in asset wealth of women.	5 years	ICAR-Central Institute for Women in Agriculture, Bhubaneswar.
4. Strengthen family farmers organizations and their capacities to generate	<ul style="list-style-type: none"> ▪ Farmer Producer Organizations (FPOs) ▪ Self-help groups and Small farmer interest groups among family farming households 	Family farmers group	Cluster formation of family farmers	Number of clusters and its sustainability	3 years	Through KVKs and MGMG by all Institutes

Pillar	Priority Policies	Expected Outcomes	Priority Actions at National Level	Indicators	Time Frame	Responsible Institutions
knowledge, represent farmers concerns and provide inclusive services in rural areas.						
5. Improve socio-economic inclusion, resilience and well-being of family farmers.	<ul style="list-style-type: none"> ▪ Nutrition chain for marginal households ▪ Introduction and scaling up of bio-fortified varieties of crops 	Improved sustainability of family of farming	Promotion of sustainable farming systems and practices	Number of sustainable farming systems /practices	5 year	ICAR-Indian Institute of Farming System Research, Modipuram
6. Promote Sustainability of Family Farming for Climate Resilient Food Systems.	<ul style="list-style-type: none"> ▪ Under National Initiative on Climate Resilient Agriculture (NICRA), model climate resilient villages (150 numbers) 	Climate resilient family farming	Development and promotion of climate resilient systems and practices	Number of climate resilient varieties and practices identified	5 Years	Institutes of Crop Science and NRM Divisions
7. Strengthen the Multi-Dimensionality of Family Farming.	<ul style="list-style-type: none"> ▪ Social innovations and sustainability ▪ Providing alternative avenues through community and social welfare centric programmes 	Inclusive development at social and territorial level	Engagement of marginal holders in policy making	Territorial Development Index	3 years	ICAR-National Institute of Agricultural Economics and Policy Research, New Delhi

5. Opportunities for Family Farmers Stakeholders

- Qualitative (without contentious inputs) production with traditional Farming Agro-ecologies.
- Linking family farming to school meal Programme for nutritional enhancement of communities.
- Enhanced Market Access and Value Chain Development for Local Plant Food Resources.
- Off-Farm Employment for Rural Youth at Community Level.
- Technological and institutional innovations.
- Learning from marginal to other category of farmers.
- Small farm mechanization to reduce drudgery.

6. Recommendations

- Agriculture, and family farming, should be the clear focus of a goal related to food security and environmental sustainability.
- Focus on science-based integration of existing components with modern technologies to promote integrated farming systems are essential for sustaining the family farms in India.
- Smallholder agriculture should enter the agenda not only through a focus on productivity but also through a broader agenda of sustainability and building system resilience.
- Needs to focus on grouping of clusters of family farms for shared resource utilization in order to reduce the costs involved in family farming.
- Integration of women centric activities in farming systems are crucial as many family farm households are managed by women folks.
- Land, capital and farm credit/insurance access to family farms especially absentee family farmers and other categories are essential.
- Building and strengthening cooperatives using a value chain approach; providing spaces for involvement of farmers through their organizations in decision making processes; using information and communication technology for awareness raising, increasing production, and linking farmers to markets are essential.
- Focus on community-driven innovations and preservation of biodiversity are key for success of family farming in India.

7. Conclusions

Family farming in India is contributing significantly to food production of the country and as of now also, more than 86 % of farmers are marginal and small. Average holding size of typical marginal household is 0.38 ha, and these farms are mostly managed by family members with reduced access to institutionalized credit and other benefits compared to small, medium and large farm households. However, the resilience of these households to climate change are very high due to diversity and lesser dependency on market inputs. These family farms also hold importance in terms of maintaining genetic diversity of the country and involvement of women are more compared to men in these type farming in India. Present programmes and policies do support for family farming in the form of cluster approach, value chain development and social engagement. Revitalization of family farming traditions with emphasis on the empowerment of women and youth will enhance small farm productivity and profitability on the one hand, and nutrition-sensitive agriculture on the other. Family farms enhance the rural livelihoods. Future policies need to focus on extending access to land and credit especially for women and community driven innovations to make the family farms more sustainable and contribute to the UNDRR action plan.

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Chapter 4

Situation of Family Farming in Nepal

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Abstract

Agriculture is a major source of livelihood and income for most of the households of Nepal. Family farming, where the agriculture is managed and work force obtained from family members, is the traditional practice of agriculture in Nepal. Nepalese family farming integrates diverse crops, livestock, fishery, pastoral and forestry, and has socio-economic and cultural values in Nepalese society. However, more than half of the households have less than 0.5 hectare of land holding and have low productivity, making the farming subsistence and even not enough to achieve the family food demand. Nepal has formulated various policies, strategies, and programs such as National Agriculture Policy 2004, Agriculture Development Strategy 2014, and many other commodity specific and cross cutting policies in order to strengthen and uplift the national economy through development of agriculture sector. Emphasis has been given to smallholder farmers, women, youths, and marginalized groups and set objectives to alleviate poverty and raise the livelihood of rural community. Nepal is participating with others to implement United Nations Decade of Family Farming (UNDF) partnering with civil society organizations. This paper comprises of the status of family farming, constraints and national action plan on all the seven pillars of the UNDF. We recommend to enhance the youth participation and proper implementation, monitoring and evaluation of the policies and programs and for coordination among different stakeholders for the upgrading of the family farming and sustainability of agriculture.

Keywords: Family farming, livelihood, sustainability, action plan, Nepal

1. Introduction

Nepal is an agrarian country where majority of people live in rural areas and depend on agriculture for their food source, income and livelihood.

Agriculture contributes 27% of Gross Domestic Product (GDP) of the country. Although Nepal is known as a Himalayan country, it has got fertile Terai (plain) region, terrain Hilly areas and Himalayan fields and pastures where agricultural activities have been done from many centuries. Out of the total land use area of Nepal, 21% land is cultivated agricultural land, whereas 7% is uncultivated agricultural land (MoALD, 2020). Out of the total population of Nepal, 60.4% (2010 AD) are involved in agriculture, whereas 60.2% of male population and 72.8% of female population are involved in agriculture (MOAD, 2020). Most of the farmers of Nepal are small holder farmers with 52.7% households having less than 0.5 hectare (ha) of land holding (CBS, 2011) and about 70% of landholdings is less than 1.0 ha size.

Agriculture being an integral part of Nepalese economy, family farming is a dominant practice of food production in Nepal. Around 70% (3,831,093) households are involved (directly or indirectly) in family farming (Kaini, 2016). Family farming has been a major source of employment and income in Nepal. Until 1980s, over 90% of the total farming population depended on family farms for their livelihood and agriculture contributed 75% of national GDP. Although the current share of GDP from agriculture has reduced to 27% (MoF, 2019), the proportion of the family farming to total agriculture is about same as previous decade (Kaini, 2016).

Agriculture has been a tradition, culture and a social status in the Nepalese community where family farming has played a key role in maintaining the tradition and culture of agriculture. The possession of agricultural land and livestock is considered as social status in society. All the working age group of the family farming are involved in at least some activities of the agriculture. Agriculture has been an emotional and cultural attachment in Nepalese community. Nepalese community celebrates national Rice day on 15th of Asar of Nepalese Bikram Samwat (BS) calendar as a festival. Farming families cultivate yam, sweet potato, barley, sesame, Anadi variety of rice, etc. as these crops have cultural and traditional values and are used in various festivals and rituals of Nepalese culture.

Family farming in Nepal is managed by family members and mostly depends upon family labor. In Nepal nearly 5 family members on average contribute to the family farm (Rapsomanikis, 2015). However, when the family labor is not sufficient, the Nepalese farmers follow a labor exchange practice (typically termed as “Parma” in Nepali) where the neighbors help the farming family when they need labor force for agricultural activities and in return the members of farming family help in neighbor’s farm when they

need help. Through such practice, the routine agricultural activities are managed in the farming communities and also the socio-cultural harmony and integrity is maintained. However, if the land holding of the family is bigger, they use hired labors for the cultivation practices.

Nepalese families have a special bond with the farm land and the ownership is taken as a pride and social status. The ownership of the farmlands and the farming are transferred to the next generation as heritage. Not only the land ownership but also the tradition of cultivation is transferred to the next generation.

In Nepal most of the family farming is subsistence farming from where the family makes an effort to fulfill their food necessity. Most of the family produce are not enough to fulfill the family demand of food and only few families have surplus produce which they sell to the local market. Based on the past experience, resources available, socio-cultural values and norms, the family decides for the farming practice to be adopted (Banjara and Poudel, 2016). Moreover, the livestock and crop diversity and variety diversity of crops are higher in the farming communities as different farming families rear different livestock and cultivate different crops and varieties. The Nepalese family farming integrates crops, livestock, pasture, forestry and fishery (Kaini, 2016). Besides, trans-human livestock rearing is still in practice in the Himalayan regions of Nepal.

The farming system in family farm is also guided by the socio-cultural values prevailing in the Nepalese society, for instance swine husbandry was not common in a Brahmin (priest) family. However, with the increase in education level and the continuous effort from government, non-government and social institutions for raising awareness and promotion for the balanced and economic agriculture, the stereotype is gradually changing and even Brahmin families have started raising swine in current days. Family farming is a way of life for the rural community. Families are having some income from selling of the surplus crops and selling the livestock such as chickens, goat in the local market. Therefore, family farming is the source of food security, income generation, poverty alleviation and natural resource management.

Nepalese family farming is a key factor in establishing and maintaining organic agriculture. The family farming resembles to organic farming as the farmer integrates livestock, vegetables, fruits and cereals (Kaini, 2016) from shed, home-garden to farm land. Many Hilly and Himalayan farm lands managed by family farming are organic lands by default, as the farmers use

very low or no chemical fertilizers and pesticides and mainly based of farmyard manure. The farm comprises of livestock which is a major source of manure or nutrient for the crops. Therefore, family farming is the medium for organic and sustainable agriculture.

The farming families are still cultivating undervalued crops such as barley, millet, buckwheat, amaranthus, etc. which are in fact high in nutritive value. Farmers also rear livestock for milk, meat and manure. Therefore, family farming in Nepal is also a source of balanced nutrition. However not all families could manage such integrated farming due to poverty and low land holding.

The family farming integrates agriculture, animal husbandry (livestock rearing) and forestry. Family farming enhances the family cooperation and family values and solidarity. It is also a source of family income, though it may not be seen economically profitable, but it has a significant contribution in family subsistence. This is also a contributor in biodiversity conservation as the family preserves various varieties and selection of indigenous crops. The family can obtain diverse food sources and nutrients from the produce of family farming. There is also exchange of seed materials within the farming communities and maintain the biodiversity and gene pool. For the sustainability of agriculture, it is vital to promote family farming.

As Nepal has committed for the success of United Nations Decade of Family Farming (UNDF), Nepal has formed steering committee, advisory committee and implementation committee for the promotion of family farming in Nepal. These different committees consist of various personnel from government (including Minister and secretaries) to representatives of NGOs and Farmers groups. The initiative works for the lobbying and advocacy for family farming policies, orientation, training and awareness to stakeholders of farming including the farming communities.

2. Constraints and Challenges

Family farming is continuing as a traditional and subsistence farming rather than commercialization. The farming is seasonal and most of the produce is mainly consumed in household and only a little amount of the farm product (if surplus) is exchanged with money. Furthermore, many farming families fail to produce sufficient food even for their own family, mostly due to poverty, less land holding and low productivity. Karkee (2008) reported that 76% of farming families produce just for their home consumption. With the possession of less cultivable land, it is not sufficient for fulfilling annual food

demand of a family with average number of family members (Roka, 2017). The report of CBS (2011) showed that farm produce of 60% of the farmers were insufficient to sustain their family livelihood. The land to labor ratio of Nepal (0.29%) is very low compared to other south Asian countries (Chaudhary, 2018). Because of the low production and unable to feed the family, many families have diverted to alternative source of income.

Family farming is major source for feeding the Nepalese population, however the energetic group of youths is not active in farming (Kaini, 2016). Furthermore, only few of the youths who return from abroad are engaged in agriculture which is a challenge to national policies to attract the youths in agriculture and family farming (Chaudhary, 2018). However, there are some positive sign that some of the youths have initiated agricultural entrepreneurship in different parts of the country. Trend of many youths (economically active population) going abroad and neighboring country India for study and working has made labor deficit in family farming. And this has increased the work-load on women, children and elderly people. Many people have stopped farming by their own and given them for contract farming or Adhiya/Bataiya. In Adhiya/Bataiya half of the farm produce is given to the land-owner by the farmer who cultivates the land. Most of the landless farmers do farming in as contract farming or as Adiya.

The farmlands of hilly area are very prone to land slide and soil erosion, because of which many families have to compromise with the yearly agricultural produce. Due to the sloppy hilly land and small terraces for farming, various agricultural interventions and mechanization are limited. Furthermore, the fragmentation of land is another issue in family farming where mechanization is very difficult. The handing over of the possession of land to the next generation has caused the fragmentation of the land. If there is more than one child in a family, then the piece of land is divided among the children. In addition, the fragmentation and conversion of fertile agricultural land into residential plots is also a threat for the sustainable agriculture and food security.

The required chemical fertilizers are not still timely available and also not in required amount. There is lack of irrigation facility and farmers depend mostly upon rain-fed agriculture. World Bank in 2014 reported that only 28% of the agricultural land of Nepal is irrigated (World Bank, 2014). The change in climatic pattern has made difficult for farmers to predict the cropping calendar. For instance, this year the monsoon period was longer and received higher amount of rainfall than previous year. Long drought, over rain,

hailstone are the constraints of Nepalese farming families. Moreover, the destruction of the crops in the fields at and near buffer zone of national parks and conservation areas cause significant economic loss to the farmers.

Although family farming is a resilient agricultural practice where various parts of agriculture are integrated, the seasonal invasion of pests and disease are a threat for farming families with low land holding and minimum income source. For instance, the invasion of fall army worm, locust (Year 2020) had cost a high loss for farmers. The occurrence of livestock disease such as bird flu, swine flu and recently observed lumpy skin disease in livestock has caused economic loss to the farmers. Moreover, the impact of climate change is very high in agriculture sector making this sector more vulnerable.

Many of the farming families do not have a proper access to the agricultural information, credit, infrastructures and facilities provided by government and various non-government organizations (Banjara & Poudel, 2016). The Nepalese farming family has less access to market and do not acquire reasonable price for their farm product as they have less bargaining power due to their less amount of marketable produce. Besides, lack of proper transport and storage facilities have compelled farmers destroy their perishable fruits and vegetables. Furthermore, the agriculture produce has to directly compete with the imported crops from India.

The agricultural lands are mostly possessed by male member of the family, even though the higher number of females are actively involved in family farming and contribute more labor than the male. Each day in the household farm, females contribute 1.4 times labor than males (Rapsomanikis, 2015). It has been observed in Nepalese agriculture that male members take the lead and become responsible for the large-scale farming/cropping. Males are involved in the agricultural mechanization while the female are limited to household food production, small scale farming with low level of technology (Basyal, 2013). There is a challenge to enhance the women empowerment in agricultural production, mechanization and marketing and make them self-sufficient to conduct and make decisions in agricultural practices.

The continuous use of same seed material for various years also reduces the potential and viability of the crop which is also the reason for lower production in family farming. Lack of proper knowledge in variety selection, use of low-quality seed, lack of proper knowledge in pest and insect management, lack of knowledge on modern technologies of cultivation, lack of technical assistance are also some of the constraints in family farming.

Along with most of the nations, Nepal is currently facing the economic crisis created by pandemic disease caused by COVID-19 virus. This abnormal situation has created challenges as well as opportunities in family farming and national agriculture and economy as a whole. There is a challenge to uplift the families who have lost their source of income and also need to absorb and engage a huge number of people who lost their job, returned and will return to the country from abroad. The opportunity is that the active working group will be available whose energy, enthusiasm, hard labor, creativity and experience could be harnessed to rejuvenate and flourish the agriculture sector of the nation. Although many programs and policies in agriculture are in action, small holder farmers, marginalized and landless farmers are not addressed properly, and the family farming is not in priority in most of those policies and programs. Furthermore, there is a challenge in proper and smooth implementation of programs due to various climatic, political and administrative obstacles of the country.

These are some representative reasons that being an agricultural country with such a huge population involved in the farming, why Nepal is importing food crops in high amount. However, this also shows that there is scope and possibility in increasing the productivity via family farming and reduce the food deficit of family and the nation. Even though the family farming is good for conservation of nature and biodiversity, it is to be kept in mind that it should also be viable to fulfill the family needs. For that the family farming should be complemented with various agricultural inputs, facilities and services.

3. Existing Policies and Programs for Promoting Family Farming

Nepal has formulated various policies and strategies for the development of agricultural sector of the country. Agriculture and rural development are important to alleviate poverty and increase national economy. The Article 51-e of the Constitution of Nepal is the basis for the agricultural policies of the Nepal government. The constitution protects and promotes rights and interests of farmers, thus emphasizing the agricultural development. Furthermore, the constitution promotes the utilization of land use policy in order to increase agricultural production and productivity and to enhance industrial development through commercialization, diversification and modernization of agriculture sector. The constitution further promotes the

planning for agricultural tools and the access to market so that the farmers obtain the appropriate price for their products (CAS, 2015).

The Government of Nepal has formulated more than 20 policy documents directly related to agriculture sector (Chaudhary, 2018). The National Agriculture Policy, 2004 which is the umbrella agricultural policy of the country, divides farmers into smallholding farmers and large holding farmers. The government has managed a provision of assistance to boost the productivity of the farmers with less than 4 hectares of land, considering them as resource-poor farmers. The policy has focused in creating a favorable environment for rural development through agriculture. Through commercialization in agriculture to contribute to food security and poverty alleviation, the policy aims for the achievement of high and sustainable economic growth.

The Crops and Livestock Insurance Directives 2013 was introduced by the Insurance Board Nepal with the focus on crops (apples, banana, paddy, potatoes, vegetables, among others), livestock and poultry, making it mandatory for all the non-life insurance companies to come up with insurance policies for these products. GON has subsidized 75% of the premium of the insurance. This policy has been implemented in co-ordination with Ministry of Agriculture Development. Livestock insurance is widely practiced compared to crops. There are 20 non-life insurance companies until the Fiscal Year 2018/19 (MoF, 2019).

Nepal has introduced Agriculture Development Strategy (ADS) for the period of 2015-2035 in order to achieve multidimensional progress of the rural households and of the nation as a whole via agricultural development. The ADS has set objectives of increasing food and nutrition security, poverty reduction, competitiveness, higher and more equitable income of rural households and strengthening the farmer's right. The strategy targets to increase the national food production in a sustainable way by increasing productivity and sustainable use of the natural resources. The ADS aims for the increase in income of farmers, reduction in post-harvest loss and improvement in access to markets. The improvement in food/feed/seed reserves to reduce vulnerability of farmers, improvement in the preparedness and response to emergencies and promoting climate smart practices are some noteworthy targets for mitigating climate change impacts on farmers. The ADS also plans to promote the micro, small and medium agro-enterprise including those led by women, youth and disadvantaged

groups, thus encouraging the involvement and empowerment of such energetic and marginalized groups (GoN, 2015a).

The 15th five-year economic plan of Nepal (Fiscal Year 2019/20-2023/24) released by National Planning Commission (NPC) has kept agricultural sector in high priority and has targeted to achieve an annual growth rate of 5.6% in the agricultural sector (NPC, 2020). Moreover, for the fiscal year 2020/21, Nepal government has allocated 2.54% (Nepali Rupees (NPR) 37.40 Billion) of the total budget for Ministry of Agriculture and Livestock Development and NPR 25.96 Billion for irrigation project. The government has provision of refinancing facility for various sectors including agriculture where 5% interest rate is fixed for loans for such sectors. Import duty has been reduced for import of machinery or raw material for agriculture, agricultural tools and seeds of rice, wheat, maize and vegetables (Budget Highlights, 2020). The government also has a Revenue policy and program which aims to provide relief to COVID-19 affected agricultural sector.

From this year, the government has initiated for fixing the minimum support price of rice before the plantation of rice. The government has fixed the support price of rice up to NPR 28.85 per Kg, for the fiscal year 2020/21. This price fixing will benefit both the buyer and seller as well as bigger and smaller farmers as they will have the price assurance and would obtain at least a reasonable price for their crops and livestock products. However, it has a challenge for monitoring and assurance of the implementation of the policy.

Moreover, MoALD has conducted various programs in coordination with various NGOs and INGOs targeting the small holder farmers. MOALD has run many projects in agricultural sector of Nepal. Food and Nutrition Security Enhancement Project (FANSEP) is focused in enhancing climate resilience and improving agricultural productivity and nutrition practices of small holder farming communities of targeted 8 districts of Nepal (FAO, 2020). Additionally, the Agriculture Sector Development Program (ASDP) under MoALD is being conducted in Karnali province which is geographically difficult region with low infrastructure development. This project focuses on food security and income raising of smallholder farmers and disadvantaged rural groups who intend for commercial production and improvement of marketing systems and value chain of selected high value commodities. Furthermore, MoALD has been implementing the concept of the “**Sanrakshit Krisi Sunischit Bachat**” (Protected Agriculture with Assured Saving) which will focus on five principal areas (Assured input supply, access to technical

service delivery, access to insurance facility, minimum support price and assured market access and easy access to soft loan). It will be extended to protection of agricultural land, its productivity and fragmentation, and also the protection of agriculture related norms and values, farmers, agricultural market and consumer's right. This also aims in income saving by reduction in production cost, assurance of market, agricultural infrastructure development in local level and providing technical service.

Various other projects of NGO and INGO for enhancing agriculture and livelihood of smallholder farmers, land less people, indigenous and marginalized community are being implemented in different areas of the country. However, it is a challenge in implementation part and a challenge to have impactful actions and address overall issues and to ensure that the real needy farming family is getting the benefit and assistance.

Nepal is implementing the UNDFP partnering with civil society organizations like Nepal Agriculture Co-operatives Central Federation Limited. The Steering committee for this is being chaired by the Secretary of the Ministry of Agriculture and Livestock Development. The Implementation committee is being chaired by the Chairman of Nepal Agriculture Co-operatives Central Federation Limited. Government of Nepal has allocated budget and programs for this year to implement through the federation.

4. National Action Plan of the UNDFP for Strengthening Family Farming

The UNDFP has defined seven pillars for all-round development of family farming. In reference to these pillars various action plans and policies are set for strengthening family farming in Nepalese context. A framework including expected outcomes, actions, timeframe, indicators and the responsible institutions for the formulation and implementation of policies and actions are tabulated in Table 1.

Table 1. National Action Plan of the UNDF for Strengthen Family Farming

Pillar	Priority Policies	Expected Outcomes	Priority Actions at National Level	Time Frame	Indicators	Responsible Institutions
1. Develop an enabling policy environment to strengthen family farming	National Agriculture Policy, 2004 revision.	Revised Policy	Feed back and technical support	6 months	Revised Policy document	MoALD, Agriculture Development Bank Limited (ADBL) and other FIs
	Kisan Credit card facility.	Access to finance.	Co-ordination	6 months	Distribution of cards	
	Subsidized Interest loan facility.	Increased access of finance.	Co-ordination	6 months	Volume of agriculture loan disbursed	
2. Support youth and ensure the generational sustainability of family farming.	Attraction of youth in agriculture and their retention: enabling policies and programs like mechanization, soft loans and marketing support.	Youth entrepreneurs' involvement in farming.	Policy and programs in mechanization, capacity development and easy access to soft loan and market.	Ongoing	Number of youth entrepreneurs in agriculture.	MoALD, MoFA, NPC, FIs

Pillar	Priority Policies	Expected Outcomes	Priority Actions at National Level	Time Frame	Indicators	Responsible Institutions
3. Promote gender equity in family farming and leadership role of rural women.	Women friendly technology development and dissemination, increase the financial and market access.	Women farmers as entrepreneurs and in lead role.	Policy and programs in mechanization, capacity development and easy access to soft loan and market.	Ongoing	Number of women entrepreneurs in agriculture.	MoALD, MoFA, NPC, FIs
4. Strengthen family farmers' organizations and capacities to generate knowledge, represent farmers and provide inclusive services in the urban-rural continuum.	Facilitate the strengthening the farmers groups and co-operatives with the support in their registration, operation and providing access to governmental and non- governmental institutions.	Strong farmers' organizations and their involvement in agricultural activities.	Exposure and capacity development.	Ongoing	Number of farmers groups and co-operatives registered and functional.	Local and Province Governments.
5. Improve socio-economic inclusion, resilience and wellbeing of family farmer, rural households and communities.	Policies and programs to increase access on inputs, markets, finance and promoting rural enterprises.	Improved livelihood of family farmers.	Enabling policies and capacity development.	Ongoing	Family farmer's income and living.	All three tiers of government.

Pillar	Priority Policies	Expected Outcomes	Priority Actions at National Level	Time Frame	Indicators	Responsible Institutions
6. Promote sustainability of family farming for climate resilient food system.	Sustainable and climate resilient farming technologies developed and disseminated.	Sustainable and climate resilient farming technologies adopted.	Exposure and capacity development activities.	Ongoing		MoALD, NARC, MOFE, Province and Local Governments.
7. Strengthen the multidimensionality of family farming to promote social innovations contributing to territorial development and food systems that safeguard biodiversity, the environment and culture.	Right to food and food sovereignty related legal framework preparation and implementation.	The rural and urban setting of Family farmers and community become developed.	Continuous support on all dimensions of food security, biodiversity conservation etc.	Ongoing	The rural areas become resilient and sustainable.	All three tiers of governments.

5. Conclusions and Recommendations

Family farming is the major source of food and livelihood in rural areas of Nepal. It is also a basis of sustainable agriculture and conservation of nature and biodiversity. Family farming is a medium for the transfer of indigenous knowledge and practices from generation to generation. They preserve environment, cope with climate change, preserve biodiversity, and practice climate adaptive methods using their local knowledge and resources. Despite the fact that majority of household are involved in agriculture, Nepal is not self-sufficient in food production and annually import huge amount of food crops from India and other countries. This shows that the productivity of Nepalese agriculture led by family farming is not basically self-sufficient and there is scope in improving the productivity. Lower land holding, poverty, lack of access to agricultural inputs in quality and quantity, lack of infrastructures and technical assistance are some of the reasons for lower productivity in family farming. Nepal has formulated various policies and programs for the multidimensional development of rural farming and family farming. However, there are always some difficulties in proper implementation of those policies and programs.

Nepal is blessed with diverse climate, soil type and topography and vegetation. Thus, such diversity could be harnessed by growing diverse crops and livestock making family farming more resilient and sustainable. The family farming is also a major strategy for maintaining organic agriculture. Therefore, family farming and organic agriculture should be promoted simultaneously so that these two agricultural practices conserve and promote each other and ensure sustainability. Moreover, programs should focus on the production of high value crops with comparative advantage in production and price and facilitate for healthy market. A farmer's group and co-operative based approach could be implied to rejuvenate family farming. Through such groups and co-operatives, the family farming will be institutionalized which will make easier for the access to various credit facility, inputs (improved seed/breed, fertilizers, irrigation), infrastructures and facilities.

Agriculture without involvement of youth will not be viable and sustainable as youths are the present and future of the nation. Thus, proper training, introduction of mechanization, agro-tourism, loan facility with low interest rate and lower mortgage should be provided to attract the youth into agriculture and family farming. Furthermore identification, listing and prioritization of smallholder farmers should be done so that the true needy

farmer will get help and it will also be easy for the government and stakeholders to reach them.

The policies and programs for agricultural development are very holistic and could raise the livelihood of rural community via agriculture. However, the proper implementation and monitoring is a must in order to achieve the significant fraction of the objectives and targets. For instance, the ADS (2015-2035) has various good policies and objectives for the economic development and livelihood through agriculture which also promote the empowerment of women, youths and marginalized people. Thus, it is recommended that the stakeholders from local level to central level try to make a favorable environment for the proper implementation of the programs and strategies highlighted in the ADS. The collaboration should be done between government, NGOs, INGOs, input providers, local bodies, and other stakeholders (such as financing agencies, banks) for achieving the goal of enhancing family farming and agricultural economy. The Constitution of Nepal has given agriculture service delivery as a major responsibility of the local government. The decentralization in federal system and the local level governments should be mobilized properly to reach and ensure the benefit of the smallholder farmers and promote family farming.

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Chapter 5

Situation of Family Farming in Pakistan

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Abstract

Agriculture is central to economic growth and development in Pakistan, which is currently the fifth most populous country in the world. The government is striving hard to make agriculture competitive and profitable through various policy interventions in line with UN's Sustainable Development Goals (SDGs). In all of these, smallholder farmers are the prime target to address considering family farming system perspective in a holistic way. The guidance provided in the Global Action Plan (GAP) of the UN Decade of Family Farming (UNDF) (2019-2028) has paved the path for formulating the proposed national action plan. The key elements include, but not limited to, availability of the reliable and updated data regarding family farmers, assessment of their exposure and knowledge to relevant policies and opportunities, their access to modern technologies and improved provision of relevant advisories and requisite services. The role of relevant stakeholders belonging to National Agricultural Research and Extension System and other pertinent departments is identified in implementing the proposed UN declaration regarding Decade of Family Farming to strengthen family farmers and to improve their wellbeing in the given timeframe of 10 years (2019 to 2028). It is anticipated that the implementation will lead to sustainability, climatic resilience, and enhanced food and nutritional security.

Keywords: Food security, sustainability, farming system, policy design and implementation

1. Background

Pakistan is currently fifth most populous country in the world with a population exceeding 212 million. More than 60% of those lives in rural areas,

where they directly or indirectly depend on agriculture for their livelihood. The agriculture sector, overall, is the dominant sector in national economy, despite its declining GDP (19.3%) share viz-a-viz services (61.4%) and industrial (19.3%) sectors (MoF, 2020). It stimulates other sectors by providing raw material and manpower. Hence, the national economy revolves around this sector which comprises of four sub-sectors namely, livestock (with 11.7% GDP contribution), crops (with 6.4% GDP contribution), fisheries& forestry (with 0.4% GDP contribution by each). The crops' sub-sector is categorized in two groups (ASP, 2019), namely, a) Major crops; and b) Minor crops. Among crops; wheat, rice, maize, cotton and sugarcane are considered as major crops while the rest are categorized as minor crops.

Similarly, there are four major livestock production systems (Afzal, 1997). These include: i) Rural subsistence small holder production; ii) Rural market oriented small holder production; iii) Rural commercial dairy farming; and iv) Peri-urban commercial dairy farming.

Importantly around 65% of the farmers in Pakistan are categorized as small farmers with less than 1 ha average farm size, and livestock is an important component of their farming system. It is estimated that there are 15 cattle, 5 buffalo, 33 sheep and 34 goat breeds in Pakistan. These small farm holders have major contribution considering system perspective by having cattle/buffaloes up to 60%, 45% of the goat population and more than 90% of livestock population (Anonymous, 1996). However, these farms exhibit varying number of animals per household. Hence, these family farmers are an important player in rural economy as owners, workers and managers (Fig 1).

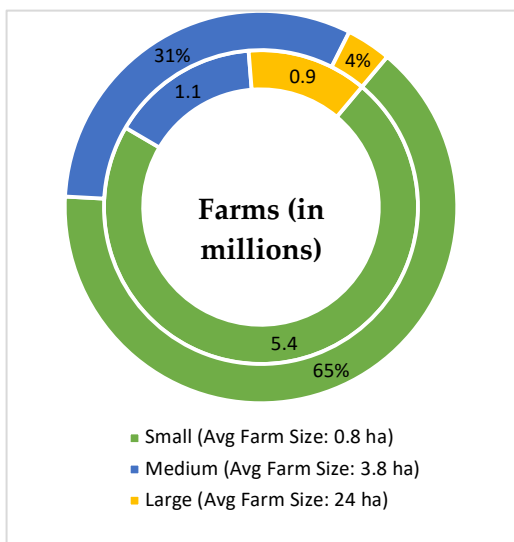


Figure 1. Farm categorization

Globally, two-third of rural population and also some of the peri-urban poor people are engaged directly or indirectly in livestock production for their livelihood and are categorized under the small family farming system. In this system women accounted for

79-93% of whole employment (Borkar et al., 2017). The rural women allocate more time (12-15 hours) for these farm duties like care and management than their male counterpart. It is reported that women participation in livestock production, is about 60.8-79.4% higher than men (Manzoor et al., 2018a; Andleeb, Khan & Shah., 2017). Similarly, in Pakistan, women also perform considerable role in rural poultry farming system (SADC, 2000; Muhammad et al., 2016).

The rural subsistence smallholder production system is most common family farming system in Pakistan. This traditional system makes heavy demand on family labor (Afzal, 1997) for farming not only for ensuring their food security (through cultivation of staple food commodities) and livelihood (Mansoor et al., 2012), but also for feeding the livestock they possess. For instance, these livestock holder families mostly depend for animals feeding upon low-cost sources of feed comprised of self-growing local grasses, leaves of different plants, grazing in fellow lands, orchards and rangelands. Few local fodders in terms of fresh and hay are also produced and used for animal feeding. Additionally, some other feed materials like wheat bran, green maize, corn stubbles, wheat straw, left over bread, vegetable and fruit wastes, cottonseed cakes, maize grains and wheat grains are also an important source of feeding the livestock (Khan & Usmani, 2005).

These farmers, however, are finding the things more and more difficult owing to their socio-economic situation, vagaries of nature in the form of climate change associated droughts, floods and temperature shocks. Among other factors, number of family members, financial constraints, low productivity as well as lack or inadequate market support are hindering their progress as well as overall sustainability of the agricultural farming systems, considering the national, regional and global efforts for ensuring food security, eradicating hunger, malnutrition and poverty.

The launch of the United Nations Decade of Family Farming (2019-2028) is a timely initiative to achieve SDGs pertaining to food and nutritional security through agricultural sustainability, resilience and diversification (FAO & IFAD, 2019). This initiative is also in line with Pakistan's Vision 2025 and 2030, that envisage food and nutritional security in the context of the entire supply chain, from production, processing, storage and distribution to consumption. The achievement of this vision is associated with an efficient, competitive and sustainable agriculture. Strengthening farmers with small landholdings, in general, and family farmers, in particular, have a key role

to play in achieving the above-mentioned SDGs and visions as far as food and nutritional security in Pakistan.

2. Constraints and Challenges on Family Farming

Agriculture is central to economic growth and development in Pakistan. Being the sector accounting for nearly 20% of GDP, engaging the largest workforce and providing raw material to most manufacturing sector, its development not only contributes towards food security, resilience and poverty alleviation but also can uplift socio-economic structure of a major segment of the population.

The uplift of small farmers would be the key as they represent an overwhelming majority of farming community and a sizeable number of them belong to family farming. There are a number of factors that are hindering their progress as well as the overall sustainability of the agricultural farming systems considering the national, regional and global efforts for ensuring food security, eradicating hunger, malnutrition and poverty. The key constraints that the family farmers are facing can be summarized as below:

- i) **Socio-economics-** Consecutive land fragmentations, size of family associated with the landholdings, members of family available as effective workforce, and cumulative financial perspectives of the family are the challenging factors for the progression of family farming.
- ii) **Climate change / climate variability-** There are a number of emerging and re-emerging biotic and abiotic stresses that are limiting the development of agriculture sector, in general, and small holder family farmers, in particular.
- iii) **Farm productivity-** The family farmers, especially those with small landholdings, are often not able to attain high farm productivity. They are either unaware of modern, innovative and climate smart management practices or unable to adopt owing to lack of availability and/or affordability.
- iv) **Value chain-** These farmers are often experiencing lack or inadequate field to market linkages or farm to fork connectivity. So, are exposed to quite higher post-harvest losses in the absence of adequate and proper storage facilities.

The COVID-19 pandemic is further heightening these constraints in a number of ways. The food security and livelihoods has gained more importance globally. The logistical issues, in the wake of pandemic, are also posing challenges to food supply. In addition to that, both major sub-sectors (livestock and crops) are experiencing particular constraints.

The major constraints to enhance the livestock productivity in Pakistan are grouped into three categories like nutritional, inadequate support services, marketing and policy (Iqbal & Ahmad, 1999). The nutritional constraints comprised feed gap, inadequate support services comprised diagnosis and treatment of diseases, vaccination programs; market and policy constraints consist non-capabilities of adjusting the seasonal fluctuations in the supply and demand for milk. Additionally, other constraints include lack of loan availability, micro-finance, poor/limited availability of breeding services (artificial insemination/embryo-transfer technologies), poor livestock marketing structure, high prices of fodder and concentrate, low milk prices, involvement of middleman, poor veterinary services at the door steps and lack of storage facilities (Hayat, 2017). There are many livestock diseases constraint which also resulted in heavy economic losses in terms of low productivity and even death of animals. The most prevalent livestock diseases are Foot and Mouth disease, Hemorrhagic septicemia, Black quarter, Pox, Anthrax, Pleura-pneumonia, Enterotoxaemia, internal/external parasites. In poultry, major diseases are New-castle disease, Mycoplasmosis, Salmonellosis, Merek's disease, Leucosis, Gumboro disease, and Fowl pox (Iqbal & Ahmad, 1999).

The crop sub-sector is facing challenge of increasing productivity of crops. The average national crop productivity of major crops is quite low to when compared in global perspective. The small farmers are getting productivity that is further low to that. Huge yield gap exists between small farmers and progressive farmers. The major challenges, in addition to those associated with climate change in the form of weather extremes and emerging diseases and insect/pests attack, include low soil fertility, lack of availability or affordability for quality inputs, such as seed, fertilizers, irrigation, and pesticides (NFSP, 2018).

3. Existing Policies and Programs for Promoting Family Farming

The farmers, particularly those with small landholdings, are the key to bring sustainable productivity enhancement. To achieve this, diversification and

capacity building of all stakeholders are among major initiatives. The existing frameworks of **Pakistan's vision 2025 and 2030** and **National Food Security Policy** envisages food and nutritional security in the context of the entire supply chain and encompasses all the relevant stakeholders. The National Food Security, specifically, highlights policy measures for the promotion of value-added food production, for the availability of diversified food products, and for formulating future R&D strategies aiming to improving the food and nutritional security and safety standards in Pakistan.

The salient highlights of the policy measures for improving food and nutritional security includes:

- Increasing productivity of major crops through developing and disseminating high yielding, disease resistant and climate resilient crop cultivars.
- Bridging the yield gaps through adoption of improved crop management strategies.
- Introducing and promoting cultivation and utilization of high value field and horticultural crops.
- Developing and disseminating micronutrients' fortified cultivars of crops.
- Developing innovations for improving food systems to produce nutritious and healthy food.
- Improving local animal breeds for enhanced productivity.
- Introducing improved rural poultry, kitchen gardening, and fish farming for food diversity and livelihood improvement.
- Developing processing clusters of high value crops, livestock and fisheries to promote rural businesses.
- Encouraging value added industry for livestock and livestock products.
- Executing risk based progressive control of trans-boundary animal diseases of trade and economic importance including Foot and Mouth Disease (FMD), and Peste des Petits Ruminants (PPR).
- Enhancing training opportunities to develop a cadre of skilled human resource for the modernization of the sector.

Pakistan is among the countries having the largest young population. Currently, 68% of the country's total population is below the age of 30. In order to achieve youth empowerment, following the principles of Education,

Employment and Engagement, the Government of Pakistan created National Youth Development Framework (NYDF) and launched a comprehensive program named “*Prime Minister’s Kamyab Jawan Program*”. Among others, the program aiming to promote the best practices in agriculture by sensitizing youth for the promotion of environmental conservation and eco-friendly behavior.

Recently, the present government, realizing the potential of agriculture and taking a holistic view of the challenges related to agriculture, has initiated “*Prime Minister Agriculture Emergency Program*” to revolutionize the agriculture and livestock sectors. The program primarily focusing on: i) Productivity Enhancement of Wheat, Rice & Sugarcane; ii) Oilseeds Enhancement Program; iii) Conserving Water Through Lining of Watercourses; iv) Enhancing Command Area of Small and Mini Dams in Barani Areas; v) Water Conservation in Barani areas of Khyber Pakhtunkhwa; vi) Shrimp Farming; vii) Cage Fish Culture; viii) Trout Farming in Northern Areas of Pakistan; ix) Save & Fattening of Calf Program; and x) Backyard Poultry Program. Small farmers, particularly, have been motivated to become part of various initiatives under the program for poverty reduction, employment generation, promotion of mechanization, improve productivity of crops.

4. National Action Plan on Family Farming

The key interventions identified in these frameworks and initiatives and those considered in line with UN declaration include productivity enhancement and increasing profitability by bridging gaps between small/medium farmers and progressive farmers through provision of necessary financial resources for capacity development and enhancement as well as provision of inputs (Table 1). And in all these, small farmers are the prime target to address considering farming system perspective in a holistic way. Extension agents are considered the key stakeholders in achieving the desired progress in crop and livestock sectors in target ecologies or areas.

Table 1. National action plan in Pakistan

Pillar	Priority Policies	Expected Outcomes	Priority Actions at National Level	Time Frame	Indicators	Responsible Institutions
1. Develop an enabling policy environment to strengthen family farming	1.1 Systemize existing information and collect/document data relevant to performance of family farming.	Reliable, locally relevant data and evidence about multi-dimensional performance of family farming in all agricultural sectors.	Data collection and inclusive research assessing multiple dimensions of family farming conducted to support well-targeted policy design and implementation for family farming in all agricultural sectors.	2024	Availability of relevant data and analytical tools / products to be used in decision-making pertaining to family farming.	Pakistan Bureau of Statistics (PBS)
	1.2 Review and improve methods applied in agricultural census in order to record contributions and performance of family farming for the support of policy development.			2024		PBS
	1.3 Provide capacity development for family farmers and their organizations, in particular women and youth, on technical and advocacy skills and promote their active participation in policy processes at all levels.	Inclusive and effective family farming focused policy design, implementation and monitoring enhanced.	Develop awareness training and advocacy campaigns and materials targeted to specific population groups.	2025		Developing inter-sectorial coordination mechanisms among governmental institutions to promote coordinated and comprehensive public

Pillar	Priority Policies	Expected Outcomes	Priority Actions at National Level	Time Frame	Indicators	Responsible Institutions
					interventions for the support of family farming.	Agriculture Extension and Adaptive Research (AE&AR)
		Awareness-raising and advocacy initiatives improving the understanding of different actors.	Raise public awareness both in rural and urban areas on family farmers' contributions to sustainable development.		Increased level of commitment to adopt comprehensive strategies to support contributions of family farming.	
2. Support youth and ensure the generational sustainability of family farming	2.1 Promote the development and implementation of coherent policies to address the adverse drivers of migration of youth from rural areas.	Active engagement of youth in family farming, rural economy and decision-making processes.	Public policies incentivizing youth engagement in agriculture	2025	Improved strategies and programs, aiming to generate decent rural employment, particularly for youth.	Federal and Provincial ministries for Planning, Development and Special Initiatives.
	2.2 Promote inter-generational and intra-generational exchange of information, knowledge and	Improved generational turnover in agriculture	Facilitating intergenerational transfer of farming resources.	2025	Incentivized generational turnover in agriculture	Federal and Provincial Departments / organizations

Pillar	Priority Policies	Expected Outcomes	Priority Actions at National Level	Time Frame	Indicators	Responsible Institutions
	practices on entrance into farming.	sectoral activities.				of Agricultural Research (AR) and AE&AR.
	2.3 Develop capacities of young family farmers to seize new employment opportunities generated through employment diversification strategies.	Improved capacity of young family farmers on innovation practices.	Developing capacity building programs for young family farmers and their organizations.	2025	Enhanced rural employment opportunities and entrepreneurship for youth.	Federal and Provincial ministries / departments, NFS&R.
				2028	Number of training	„
3. Promote gender equity in family farming and the leadership role of rural women	3.1 Incentivizing women engaging in family farming, offering them diverse opportunities along the supply chain to take advantage of family farming.	Improved and active engagement of rural women in family farming and in rural economy.	Implementing programs to provide equal opportunities for women and men in family farming, taking into account the capacities, needs and aspirations of rural women.	2028	Conducted capacity development programs to support rural women	Federal and Provincial Departments / organizations of AR and AE&AR
					Developed awareness-raising campaigns to promote the contribution of rural women to family farming.	Academic institutions and NFS&R Provincial Ministries for Agriculture

Pillar	Priority Policies	Expected Outcomes	Priority Actions at National Level	Time Frame	Indicators	Responsible Institutions
	3.2 Facilitating the exchange of successful experiences and actions promoting and generating social, economic and cultural change towards empowerment of rural women.	Successful experiences of women achieving affirmative political, social, economic and cultural change.	Supporting exchange programs on good productive practices and successful public policies empowering women in family farming and alignment of those to local political, social and cultural values.		Accelerated knowledge sharing for the empowerment of rural women.	
4. Strengthen family farmers' organizations and capacities to generate knowledge, represent farmers and provide inclusive services in the urban-rural continuum	4.1 Providing trainings and capacity development for family farmers' organizations to foster their organizational skills at national, regional and global levels.	Strengthened organizational capacities of family farmers' organizations.	Strengthening capabilities and expertise of family farmers' organizations to foster their services for sustainable livelihood.	2028	Strengthened family farmers' organizations with enhanced technical and service provision capacities	NFS&R Provincial Ministries for Agriculture Federal and Provincial Departments / organizations of AR and AE&AR.
			Awareness raising on the UNDF, role of family farmers for sustainable livelihood.			

Pillar	Priority Policies	Expected Outcomes	Priority Actions at National Level	Time Frame	Indicators	Responsible Institutions
5. Improve socio-economic inclusion, resilience and well-being of family farmers, rural households and communities	5.1 Promoting the development of adequate social protection programs that can effectively respond to the vulnerabilities of family farmers across the life cycle and addressing multiple social, economic and environmental vulnerabilities of family farmers and their communities by promoting the development of sustainable and resilient livelihoods.	Enhanced standard of living and reduced household vulnerability for family farmers.	Promoting the expansion and scaling-up of social protection interventions.	2028	Improved social protection, human development, advisory and financial services for family farmers that enhance rural poverty reduction, food and nutrition security.	Federal and Provincial ministries / departments for Planning, Development and Special Initiatives
	5.2 Strengthening resilience and economic viability of family farmers through the application of sustainable and diversified production practices, innovations and their access to a diverse and nutritious diet.	Strengthened production capacities of family farmers to improving diversification, efficiency and adaptation to climate change.	Supporting capacity development for family farmers based on assessed needs to increase application of technical solutions and innovations to adopt and transition from vulnerable subsistence to new sustainable practice.	2028	Capacity development programs formulated aiming at reducing vulnerability and making agriculture more productive and	Federal and Provincial Departments / organizations of AR and AE&AR.

Pillar	Priority Policies	Expected Outcomes	Priority Actions at National Level	Time Frame	Indicators	Responsible Institutions
			Promoting agricultural advisory and extension services.		more sustainable.	
	5.3 Promoting the development and implementation of frameworks supporting access to domestic and local markets for family farmers.	Improved access of family farmers to markets guaranteeing increased participation and adequate remuneration and income-generating opportunities, particularly for youth and women.	Promoting short food supply chains (also directly linking to urban consumers) that enable family farmers to obtain a better income from their production.	2028	Family farmers' access to markets improved.	Federal and Provincial ministries / departments for Planning, Development and Special Initiatives
			Promoting capacity development programs for family farmers and their organizations on traditional food preservation techniques in rural areas and value-adding for local products via agro-processing.	2025		NFS&R Federal and Provincial Departments / organizations of AR, AE&AR, and Academic Institutions.
6. Promote sustainability	6.1 Promoting the development and	Strengthened family	Promoting innovative and	2028	Policies, strategies and	NFS&R

Pillar	Priority Policies	Expected Outcomes	Priority Actions at National Level	Time Frame	Indicators	Responsible Institutions
of family farming for climate-resilient food system	dissemination of family farming-specific schemes which reduce their risks, costs and promote partnerships and cooperation between family farmers, their organizations, cooperatives and public and private institutions.	farmers' capacities to innovate and increase productivity in a sustainable manner.	integrated farming practices to increase productivity in a sustainable manner, optimizing the diversity of species and genetic resources reducing the use of external inputs, fostering the efficiency and the climate change mitigation also through providing specific technical extension and advisory services by and to family farmers.		programs formulated for the support of family farming aiming at making agriculture more productive and more sustainable and addressing climate change and environmental degradation.	Provincial Ministries for Agriculture Federal and Provincial Departments / organizations of AR and AE&AR Federal and Provincial ministries / departments for Planning, Development and Special Initiatives Academic Institutions
			Developing and implementing frameworks that foster sustainable agricultural production based on the efficient use and	2028	Capacities of family farmers and other relevant institutions strengthened to implement	National / Multi-National Agriculture R&D organizations (PPP Mode)

Pillar	Priority Policies	Expected Outcomes	Priority Actions at National Level	Time Frame	Indicators	Responsible Institutions
			sustainable management of natural resources.		strategies and activities.	
	6.2 Providing enabling framework to promote direct linkages of family farmers to consumers in rural and urban areas to maximize their potential for beneficial access to reliable and remunerative markets contributing to more sustainable food systems (<i>including reducing food loss and waste</i>).	Designed and implemented family farmers' supportive framework for improved access to markets.	Strengthening collaboration between family farmers, providing capacity development for them and their organizations on processing and other value-adding activities at farm level to increase opportunities to better access markets.	2028	Improved family farmers' access to markets.	NFS&R Federal and Provincial Ministries. Academic and research Institutions. National / Multi-National Agriculture.

Pillar	Priority Policies	Expected Outcomes	Priority Actions at National Level	Time Frame	Indicators	Responsible Institutions
7. Strengthen the multidimensionality of family farming to promote social innovations contributing to territorial development and food systems that safeguard biodiversity, the	7.1 Supporting family farmers to conserve, sustainably use, exchange and dynamically manage biodiversity (<i>including native seeds, farmers' varieties, landraces, neglected and underutilized species</i>).	Improved synergies between agricultural production systems and enhanced management of biodiversity and ecosystem services by family farmers.	Providing programs for family farmers to develop and manage production systems, which can optimize the diversity and complementarity of species and can increase biological synergies between crops, livestock and trees, leading to greater resource use efficiency, resilience and increase their productivity.	2025	Strategies aiming at increasing synergies between agriculture, increasing biodiversity and ecosystem services by family farmers developed.	NFS&R Provincial Ministries for Agriculture Federal and Provincial Departments / organizations of AR and AE&AR

Pillar	Priority Policies	Expected Outcomes	Priority Actions at National Level	Time Frame	Indicators	Responsible Institutions
environment and culture	7.2 Incentivizing economic opportunities and markets for new products, goods and services of family farmers allowing them to keep and re-invest the value added in their production unit boosting territorial development.	Innovative economic opportunities and market solutions promoting services and goods of the multi-functional family farming, embedded and built on resources provided by the local context in place.	Developing economic opportunities and markets favoring qualified and socially sustainable products, goods and services emerging from the multidimensionality of family farmers.	2025	Improved access of family farmers to a set of services, finance, knowledge, technologies, rural infrastructure, markets promoting diversified economic opportunities and strengthening the multi-functionality of family farmers.	NFS&R Provincial Ministries for Agriculture. Federal and Provincial Departments / organizations of AR and AE&AR. Federal and Provincial ministries / departments for Planning, Development and Special Initiatives.

5. Conclusions and Recommendations

Family farmers are an important player in rural economy as owners, workers and managers. It is estimated that, out of 212 million population of the country, more than 133 million (around 63%) live in the rural areas. Without giving the coherent and comprehensive support to family farmers, the dreams of uplifting the socio-economic conditions of the rural masses can't come true and the envisaged increase in this sector can't be materialized. The Global Action Plan of the UN Decade of Family Farming (2019-2028) provides a detailed guidance for various stakeholders to build respective plans and strategies for achieving the objectives as conceived in the vision statement. The authors identified key interventions and frameworks and proposed initiatives (considering farming systems' perspective) pertaining to agricultural research and development and policy prototype for sustainable development.

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Chapter 6

Situation of Family Farming in Sri Lanka

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Abstract

Agriculture is a main livelihood provider in Sri Lanka, especially in rural areas, where a significant proportion practices Family farming. Use of family labor, small land holding sizes and the ownership are some common features of family farming. However land fragmentation, low productivity and profitability of farming and migration of youth from agriculture are some constraints specifically affecting the sustainability of family farming. Even though family farmers produce significant quantities and contribute to the country's food security, those are a group that needs assistance and support. It is important to recognize the challenges they are facing and take actions. Low income and poverty, problems of marketing, lower productivity and high cost of production, effect of global climate change, limited access to financial resources, extension services, and new technologies are the major challenges faced by the family farmers. Existing sectoral policies are focused on activities such as ensuring farmer welfare, increasing land productivity, modernization of Agriculture; promote youth entrepreneurship and improving marketing and transportation that addresses the basic needs of the family farmers.

Keywords: Livelihood, family farming, sustainability, sectoral policies

1. Background

Agriculture is one of the key drivers of national economic growth of Sri Lanka. According to the Economic and Social statistics of Sri Lanka (2018), 26.1% of the labor force is engaged in agricultural activities as their employment. Agriculture is the main stay of the rural areas where most of the people live, hence important in their incomes and livelihoods. The percentage share of agriculture to the national GDP (Gross Domestic Product) is 7% in 2019, of which, the crop sector contributes 4.6%, the

fisheries sector contributes around 1.2% and the livestock sector accounts for 0.8%. Further Agriculture sector is accounted for 17.8% of total exports during the period of 2013-2016.

Sri Lanka, historically named the 'Granary in the East' has a favorable climate for crop production, a fertile soil, an ancient irrigation network as well as recent irrigation schemes, and abundant sources of water. About 44% of its area is cultivated. Despite this, its Agriculture is currently facing the issues such as low productivity, low profitability and is also affected by the challenge of global climate change, which result in sudden crop losses.

1.1 Country Profile

Sri Lanka is an island in the Indian Ocean, which consists of an area of 65,610 sqkm. Its climate is defined as Tropical, with distinct dry and wet seasons. The central part of the country is mountainous; hence the major factor affecting the temperature variation within the country is altitude. Accordingly, the country is divided into 46 agro-ecological regions. The average temperature varying from 24.4^oC to 32^oC in Low Country and from 16.6^oC to 26.1^oC in Hill Country. The annual average rainfall is 1757mm, and it varies from 900mm in the driest parts to 5000mm in the wettest parts of the country. The average population of the country is 21.67million with 1.1% growth rate. The labor force of the country consists of 8.39 million people, which comprises of 73% males and 33.6% females (FAO, 2018). However, the unemployment rate of the country is 4.4% of the labor force.

1.2 Agriculture in Sri Lanka

Agriculture sector mainly comprised of crop sector which includes plantation and non-plantation sectors, livestock and poultry, Fisheries and aquaculture. Rice is the major food crop growing in the country, which occupies 14% of the total land area (34% of the total cultivated area). Rice farming is the main occupation in rural rice growing areas. Cultivation is confined to two major growing seasons and annual production is about 4 Million metric tons in 2018. Although rice is mainly grown in irrigated lands, non-irrigated lands are also being cultivated across the country.

Next to rice, fruits and vegetables are the most consumed food crops. More than eighty different varieties of fruits and vegetables are grown in different agro-ecological regions in the country. Other field crops such as Maize, Chilli, Onion, Green gram, black gram, Soybean etc. and root and tuber crops like potato, cassava, and sweet potato can be considered as other important crops which come under the food crop category.

Plantation crops have played a significant role in the Sri Lankan economy from the past. The major plantation crops are Tea, Rubber and coconut which brings a significant amount of foreign exchange into the country. These crops usually exist as large commercial plantations. Moreover, the major spice crops, namely cinnamon, pepper, cloves, nutmeg are named as export agriculture crops with high potential benefits. Agriculture in the country is dominated by smallholders, with over 70% of cultivated land being smallholdings and home gardens cultivating on less than one hectare of land in extent.

Livestock sector contributes 0.8% to the GDP (% at current market prices), dominated by small farmers. All categories in the livestock sector, namely, Cattle, Buffaloes, Goats, Sheep and Swine contribute more than 92% from Small Holding Sector. But about 28% of poultry comes from the estate sector. Most of the time, dairy farming is a small-scale domestic activity. Total milk production in Sri Lanka is sufficient for only one fourth of the population. Poultry production is much higher, and it has now become a common source of animal protein. The fishery sector, also dominated by small holders, comprises coastal and deep-sea marine fishery, aquaculture practiced in coastal waters and large inland reservoirs and ponds, producing finfish, prawns, ornamental fish etc.

1.3 Family Farming in Sri Lanka

The concept of family farming resembles “Small holder farming” in Sri Lanka. These small holder farms are characterized by small (relatively) farm size, operated by the family, and most of the times operated with no hired labor (Garner & de la O Campos, 2014). But there are occasional instances of a limited number of non-family hired labor being used. The family or operator is responsible for the management of the farm. The farm ownership is usually passed through generations, but there are challenges of the generational aspect of the family farming. The farms usually provide sufficient food for the households. These are not subsistence level farms and produce food for the community and they hold a significant part of the country’s food security.

MONPEA (2014) categorized agriculture holdings according to their size. Estates – an agriculture holding more than 08ha or large is named an estate. (An agriculture holding that is having at least one parcel of 08ha or more under the same unit of management). Small holdings – i) Operational holdings, the extent less than or similar to 0.1 ha- mainly produce output for

home consumption; and ii) Holdings above 0.1ha – consider as giving contribution to the national output.

Table 1. Distribution of agricultural holdings by sector

Group	Holdings		Extent	
	Number	Percentage	Hectares	Percentage
Small Holding sector	4,345,674	99.8	1,880,274	82.3
Small holdings extent less than 0.1ha	2,034,331	46.7	97,035	4.2
Small holdings extent more than 0.1ha	2,311,343	53.1	1,783,239	78
Estates	7,447	0.17	404,454	17.7
All sectors	4,353,121		2,284,728	100

Source: MONPEA (2014)

In plantation sector (tea and rubber), this amount is much higher. However, this figure shows that majority of small-scale farmers are producing much of the food requirement and securing the country's food security. When compared with similar study data in 2002, number of small holdings extent with less than 0.1ha showed increase of 1.7% depicting the land fragmentation with time. However, in term of extent, the contribution towards agriculture is considered as marginal, since the produce of these holdings were mainly meant for home consumption and not catered for the market.

About 99.8% of them operate small holdings, of which 46.1% is responsible for operating holdings less than 0.1ha. Although a large number of females are engaged in various agricultural activities in both small scale and estate sectors, the operators or the decision makers are mostly males.

2. Constrains and Challenges in Family Farming

i) Low Income and Prevalence of Poverty Among Small Farmers

Livelihood enhancement of small farmers is one of the major challenges. According to Elizabeth Garner and Ana Paula de la O Campos⁴ (FAO, 2014), in developed countries, family farming is more of an institution to protect or preserve. But in developing countries, the family farming is seen as something that needs assistance and support. This is very true with the Sri Lankan family farming situation. Rural poverty has been identified with small holder farmers where the income cannot provide for an acceptable standard of living.

ii) Problems with Product Marketing

The inefficiency of marketing system for agricultural products has become one of the major factors that make agricultural development goals and increasing production and income of farmers in developing countries hard to achieve. For family farming to be sustainable and to better secure the livelihood, the income earned should be beyond the subsistence level. The existing problems in the field of agricultural products marketing can be identified as poor access to markets, little market know-how or market intelligence, non-assurance of the markets and the fluctuating prices. In addition to that, inadequate infrastructure of marketing facilities, price volatility, the seasonal nature of agricultural production, inadequate market information systems, plenty of dealers and brokers as well as inappropriateness of government support in market development and marketing policies for rural products also identified as major problems. Due to all these factors farmers have limited chances to increase their incomes and value addition to their products and also to combat rural poverty.

iii) Low Productivity and High Cost of Production

Cost of production refers to the total cost incurred by a business to produce a specific quantity of a product or offer a service. Production costs may include a number of things such as labor, raw materials, or consumable supplies. This is a big issue in Sri Lanka. New technologies have to be introduced and new extension methods should be adopted to increase crop production as well as to enhance the productivity and thereby reduce the cost of production. Practices like GAP could be adopted to reduce the unnecessary usage of agrochemicals and to reduce the cost of production.

iv) Lack of Use of Technology on Value Addition Technologies

Agricultural technology can be considered as a major factor contributing to increase in agricultural productivity. Rapid technological change leading to increase productivity and Lack of technology on post-harvest value addition /processing technologies is a challenge and a constraint to increase farmers' income. Such technologies could also contribute to reduce high post-harvest losses too. Solutions to address post-harvest losses are critical to reduce the potential demand-supply gap in agriculture. Post-harvest losses have direct economic implications on farmers. When a kilogram of produce is wasted, losses occur through the production process, including the cost of inputs such as land, seeds, water, fertilizers and pesticides as well as the effort that the farmer and his family puts into production. Lack of storage and

warehousing facilities also impacts the farmers' incomes as they are often driven to selling their produce at very low prices to avoid losses due to spoilage.

v) Effects of Global Climate Change

Unpredicted extreme weather conditions such as heavy rains, floods and severe droughts result in heavy crop losses. Contraction of overall agriculture activities happened due to the unexpected weather-related disturbances even during the last year. Climate change and agriculture are interrelated processes, both of which take place on a global scale, with the adverse effects of climate change affecting agriculture both directly and indirectly. In order to face the effect of global climate change, modern technologies such as precision farming and climate resilient technologies should also be introduced.

vi) Limited Access to Financial Resources

Smallholders tend to have little or no access to formal credit, which limits their capacity to invest in the technologies and inputs they need to increase their yields and incomes. This result in continuous dependence on government assistance programs. Furthermore, without adequate access to loans or insurance, producers who face negative shocks, such as droughts, illness or a significant drop in the prices they receive.

vii) Limited Access to Advisory and Extension Services

Extension and advisory services may provide an opportunity for strengthening the resilience of rural and farming households by increasing their access to tangible and intangible resources, such as inputs and knowledge. More generally, extension and advisory services may be able to play a critical role in promoting agriculture and rural development and improving the resilience of the sector as a whole. Extension officer have to support large number of farm families thus creating limited access to the services by farmers.

viii) Migration of People (especially youth) Out of Farming

In the past few years, rural youth have been away from agriculture as the present situation in agriculture/farming is not attractive enough in regard to income or technology. The sector has failed in absorbing the unemployed youth (including women) who are seeking employment out of the village and family. Rural youth recently reported that access to information, lack of credit and negative perceptions around farming are the major reasons.

ix) Land Fragmentation Through Generation to Generation

Generally, land fragmentation is a universal trait of all agricultural systems which affects farmland productivity. Holding size becoming smaller and number of holdings increasing with time is a constraint to achieve a higher productivity level and attractive income.

x) Lack of Due Recognition for Family Farming

The role of family farming and their contribution for the country's food security, alleviating poverty and generating employment should be properly acknowledged by others.

xi) Gender Challenges

Women play a vital role on many farms but are often not in a decision-making role. Women contribute substantially to family farming labor, but less to farm management. Where the farm is isolated, a woman may miss frequent social contact with neighbors, especially if rural services are few, there is a lack of local help with childcare, and accompanying children to and from school takes up time in travel. Even in farming villages, they may feel isolated from wider society.

3. Existing Policies and Programs for Promoting Family Farming

- National Agriculture Policy (2007)
- National Land Use Policy (2007)
- National Livestock Policy (2006)
- National Fisheries and Aquaculture Policy (2018)
- National Policy and Strategy on Cleaner Production for the Agriculture Sector (2012)
- Trade Policy (2017)
- National Policy on Sustainable Consumption and Production (2018)
- National Rainwater Harvesting (RWH) Policy and Strategies (2005)
- National Seed Policy (1996)
- Agricultural Credit Policy and Agricultural Insurance Policy
- Fertilizer Subsidy Program in Sri Lanka.

3.1 National Agriculture Policy 2007

National Agriculture Policy was introduced in 2007 by the Ministry of Agriculture with key aims of assuring food security, ensuring environmental

sustainability and developing economic opportunity. Agricultural activities in Sri Lanka operate within a framework of national policies and facilitate improvements in crop, fishery and livestock production, strengthen markets and value chains, find solutions to connectivity and logistics issues and strengthen private sector participation in service delivery. They also concern sustainability and the challenges associated with changing weather patterns, labor shortages, fragmentation of land holdings and continuing land degradation in trying to improve food production and establish commercially viable agriculture units.

3.2 National Land Use Policy 2007

National Land Use policy was approved by the Cabinet of Ministers in 2007, and the Department of Land Use Policy Planning was established through it. It has provided an appropriate policy framework, to ensure proper land use, food security, economic development and the maintenance of the productivity of the land at a higher level. This policy provided a path for the protection, conservation and sustainable use of the land resource of the country ensuring food security and income generation through the sustainable utilization of agricultural lands (MOLD, 2014). It also facilitates the allocation of land that provides the greatest sustainable benefits. Land users are encouraged to increase their land productivity in a sustainable manner.

3.3 National Livestock Policy 2006

National Livestock Development Policy (2006), Animal Breeding Policy Guidelines (2010) The Animal Feed (Amended) Act (2016): Provide guidance for production support and service delivery, breeding guides for cattle, buffaloes, goats, sheep and pigs; Quality of the semen imported for artificial insemination; Vaccination and drugs required to provide quality veterinary service; Provide high quality feed material to the livestock and poultry industry.

3.4 National Fisheries and Aquaculture Policy 2018

The policy has focused on the sustainable management of the fisheries industry and aquaculture farming with equitable distribution of benefits. The policy provides provisions for engagement in the fisheries industry in accordance with the International Standards, elimination of illegal fishing, and introduction of appropriate new technology, minimizing of the post-harvest losses, increasing of the national fish consumption, promotion of fish

product exports and enhancing the socio-economic status of the fisher community.

3.5 National Policy and Strategy on Cleaner Production for Agriculture Sector 2012

This policy pay attention to the areas of increasing environment friendly agro- productions, minimization of environmental pollution due to the use of agro-chemicals, marketing management, correct polices and planning, accurate land management, development of soil conservation methods for agricultural lands and delivery of agricultural production to the market with the environmental friendly production label. Mainly the food security of the people has to be ensured while maintaining the ecological balance for the benefit of the mankind.

3.6 National Policy on Sustainable Consumption and Production 2018

Sustainable Consumption and Production (SCP) aims at improving economic development and social welfare while protecting the environment and managing natural resources sustainably (GOS, 2018). SCP is needed to improve quality of life, particularly for the underprivileged, and provide the basic needs for all, including access to food, shelter, health, mobility and education services. This policy provides an effective framework to enhance the sustainability of the country's economic development drives through efficient and effective utilization of it natural resources

3.7 National Policy on Protection and Conservation of Water Sources, their Catchments and Reservation in Sri Lanka 2014

This policy covers the micro-catchments of rivers and streams, natural and man-made tanks /reservoirs and shallow lakes, and aquifers. It is the primary intention of this policy to ensure the protection and conservation of all the water sources and their source areas in Sri Lanka through optimum management.

3.8 National Rainwater Harvesting (RWH) Policy and Strategies 2005

The National Rainwater Harvesting Policy and Strategy was adopted in 2005, to bring legal, institutional and programmatic arrangements to optimize the management of rainwater.

3.9 National Seed Policy 1996

Government introduced NSP in 1996, with the new developments new policy being formulated – 2005. The objective was to establish viable seed

enterprises for easy access for high quality seed. As a result the national seed program becomes a multi institutional function involving the public & private sectors. This policy was mainly aimed at reducing cost of production of seed paddy, encouraging private sector participation in seed production and marketing, concentrating government involvement in breeding, testing and quality certification with the legal basis being provided by the National Seed Act No. 22 of 2003 and Plant Protection Act No. 35 of 1999.

3.10 Agricultural Credit Policy and Agricultural Insurance Policy

Agricultural credit policy and agricultural insurance policy, under which credit and insurance were provided to safeguard farmers from inherent risk, date back to the 1970s. The New Comprehensive Rural Credit Scheme of 1986 formed the basis of subsidized agricultural credit. In 1995 the government also introduced a farmer pension scheme to be implemented under the same institutional set up for farmers and fishermen. Presently the agricultural insurance scheme covers paddy subsidiary food crops, betel, sugar and livestock.

3.11 Agrarian Services and Farmer Organization Policy

The agrarian services and farmer organization policy, and Department of Agrarian Services (currently the Department of Agrarian Development) were established to coordinate all agricultural activities and provide services at grass-root level.

3.12 Fertilizer Subsidy Program in Sri Lanka

Since 2005, the fertilizer subsidy has accounted for 2–2.5% of total government expenditure and the subsidy is given for all three major fertilizers: namely, Urea, Murate of Potash—MoP, and Triple Super Phosphate— TSP. The fertilizer subsidy, which was limited to rice cultivation, has expanded since May of 2011 for highland crops and vegetables.

4. National Action Plan of the UNDFP

Family farming/Small holding farming sector consists of a majority of the farmers in Sri Lanka. In spite of many government policies and programs implemented targeting livelihood enhancement of small holder farmers (MOA, (2017), there are still many constraints and challenges which need further attention. In order to make family farming productive and sustainable, it is vital to make priority policies and actions to be taken.

Table 1. National action plan of the UNDF for strengthen family farming

Pillar	Priority Policies	Expected Outcomes	Priority Actions at National Level	Time Frame	Indicators	Responsible Institutions
1. Develop an enabling policy environment to strengthening family farming	Building-up a healthy and productive nation guaranteeing the people's right for safe food	Healthy and productive nation	<ul style="list-style-type: none"> ▪ Policy actions to ensure food security and food safety. ▪ Introduce a simple low interest agricultural credit scheme to farmers. ▪ Introduce a new crop insurance scheme. ▪ Empowering coastal fishing families for home gardening and fishery related income generation activities. 	2020-2025	<ul style="list-style-type: none"> ▪ Number of credit schemes formed. ▪ Number of beneficiaries. ▪ Number of families and programs. 	Ministry of Agriculture, Ministry of Trade, DFAR, NAQDA
2. Support youth and ensure the generational sustainability of family farming	Promote youth entrepreneurship in agriculture	Reduce migration of youth out of Agriculture	<ul style="list-style-type: none"> ▪ Introduction of import tariff benefits and low interest loan schemes ▪ Building up agricultural entrepreneurs. ▪ Empowering youth of coastal fishing families for home gardening and fishery related income generation activities and decision making. 	2020-2025	<ul style="list-style-type: none"> ▪ Number of youth entrepreneurs. 	Ministry of finance, Ministry of Agriculture, Ministry of youth affairs, DFAR, NARA

Pillar	Priority Policies	Expected Outcomes	Priority Actions at National Level	Time Frame	Indicators	Responsible Institutions
3. Promote gender equality in family farming, and the leadership role of rural women.	Women to be empowered economically and socially	Harnessing the contribution of women to development plans	<ul style="list-style-type: none"> ▪ Regulate, standardize and expand childcare facilities for increasing women participation in the labor force. ▪ Introduce home-based enterprise with required assistance for rural women. ▪ Reduce all kind of sexual and gender-based violence for women set up a 24-hour emotional support and advisory help line. 	2020-2025	<ul style="list-style-type: none"> ▪ Number of childcare centers formed ▪ -Number of home based enterprises formed 	Ministry of Women and Child Affairs, Ministry of Agriculture
4. Strengthen family farmer organizations and capacities to generate knowledge, represent farmers and provide inclusive services in the urban-rural continuum.	Promoting cooperative farms at local and regional level	Established family farmer organizations	<ul style="list-style-type: none"> ▪ Re-establish the pension scheme for farmers ▪ Introduce an attractive insurance scheme ▪ Introduce an Agriculture Crop Management System 	2020-2025	<ul style="list-style-type: none"> ▪ Number of beneficiaries. 	Ministry of finance, Ministry of Agriculture
5. Improve socio-economic inclusion, resilience and well-being of family farmers, rural households and communities	Providing technical and financial support to farmers' organizations to play and active role in implementation of programs.	Strengthened farmer organizations	<ul style="list-style-type: none"> ▪ Introduce matching grant schemes 	2020-2025	<ul style="list-style-type: none"> ▪ Number of beneficiaries 	Ministry of Agriculture

Pillar	Priority Policies	Expected Outcomes	Priority Actions at National Level	Time Frame	Indicators	Responsible Institutions
6. Promote sustainability of family farming for climate-resilient food systems	Agriculture development through advanced technological innovations	Modernize agriculture. Increase Land Productivity	<ul style="list-style-type: none"> ▪ Introduction of environmental friendly farming, Climate resilient crops ▪ Import of tax free solar powered water pumps and solar cells ▪ High tech agriculture, promoting cooperative farms at regional level. ▪ Adopt integrated soil fertility management system 	2021-2015	<ul style="list-style-type: none"> ▪ Number of technologies introduced 	Ministry of Agriculture
7. Strengthen the multidimensionality of family farming to promote social innovations contributing to territorial development and food systems that safeguard biodiversity, the environment and culture.	Strengthen sustainability and resilience of rural family farms/ Sustainable use of natural resources.	Enhance household nutrition and income.	<ul style="list-style-type: none"> ▪ Promote home gardening and urban agriculture. ▪ Empowerment of home economic units. 	2021-2025	<ul style="list-style-type: none"> ▪ Number of units developed 	Ministry of Samurdhi home economy, Ministry of Agriculture

5. Conclusions and Recommendations

Smallholder family farmers play a vital role in economic development of the country. Nearly eighty percent of the farmland in Sri Lanka is managed by smallholders. Despite their important role in food security and sustainable agriculture, smallholders are the most food and financially insecure, given an array of challenges including lack of capital; limited access to infrastructure, markets, technologies, financing & market price information; lack of access to land and emerging climate change risks. Due to above factors, the contribution of smallholders to enhance food security and sustainable agricultural development is inhibited by poverty. Improving production capacities and the resilience of smallholder farmers is essential for food security, poverty reduction, new job opportunities creation and sustainable growth in Sri Lanka.

It is time to re-consider smallholder family farmers' potential to combat current global challenges while recognizing their constraints. In national contexts, policies need to meet the needs and demands of smallholder farmers as productive economic units by creating the enabling conditions to establish a modernized agriculture system which promote sustainability of family farming.

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Chapter 7

Overview of the United Nations Decade of Family Farming (UNDF) and Global Action Plan 2019-2028

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Abstract

The UN Decade of Family Farming 2019-2028 (UNDF) was launched on 29 May 2019 at FAO headquarters, Rome. The UNDF aims to shed new light on what it means to be a family farmer in a rapidly changing world and highlights more than ever before the important role family farmers play in eradicating hunger and shaping our future of food. Together with its Global Action Plan, it serves as a framework for countries to develop public policies and investments to support family farming from a holistic perspective, unleashing the transformative potential of family farmers to contribute to achieving the Sustainable Development Goals (SDGs).

Keywords: Family farming, global action plan, SDGs, United Nations

1. Putting Family Farmers at the Center to Achieve the SDGs

Today, there are over 2.1 billion poor people in the world, of whom 767 million live in extreme poverty (World Bank, 2016). More than 820 million people are chronically hungry (FAO, IFAD, UNICEF, WFP & WHO, 2019). Almost 80% of the world's poor and food insecure live in rural areas, mostly depending on agriculture production for their subsistence. Most of the rural poor are small-scale family food producers who depend on agriculture and aquaculture for their food and income but face many difficulties accessing productive resources, opportunities and markets.

The Sustainable Development Goals (SDGs), particularly ending poverty and achieving Zero Hunger will have to be accomplished in the context of climate-change-related hazards that are putting pressure on food systems and are increasingly perceived as a driver of potentially vast migratory flows. By 2050, population growth and dietary changes will drive food needs

up by 60%, and already jeopardized agricultural production and livelihoods will face the challenging goal of providing a growing population with sufficient and healthy food and preserving a depleted natural resource base. Agriculture produces at least one-quarter of global greenhouse (GHG) emissions. The consequent effects of climate change are in turn increasingly felt in agriculture itself, which is highly dependent on climate conditions and therefore progressively subject to change and variability, with obvious impacts on food security.

This scenario calls for a necessary transition towards a new paradigm informing food systems and rural development, which puts environmental, social and economic sustainability at the centre, to ensure food and nutrition security for all, preserve the environment and provide jobs and social development opportunities for rural dwellers. Family farmers lie at the heart of this transition.

In both developed and developing countries, family farming (FF) represents the predominant form of food and agricultural production. Family farmers include peasants, indigenous peoples, traditional communities, fisher folks, mountain farmers, pastoralists and many other groups representing every region and biome of the world (FAO & IFAD, 2019).

The Asia and the Pacific (AP) Region holds around 60% of the world's population and is home to 74% of its family farmers, including small-scale farmers, fishers and livestock producers. Small-scale food producers produce almost 80% of the milk, and 80–90% of aquaculture farms are family based. Overall, family farmers produce 80% of the region's food and work 85% of the total farmed land.

Given the enormous diversity of family farmers around the world, there is no single definition of family farming. It can be regarded as “a means of organizing agricultural, forestry, fisheries, pastoral and aquaculture production which is managed and operated by a family and predominantly reliant on family capital and labor, including both women and men. The family and the farm are linked, co-evolve and combine economic, environmental, social and cultural functions (FAO, 2013). It has been defined as a way of life.

Family farmers, considering their multi-dimensional nature, play a key role in contributing to food security and nutrition, managing natural resources, ensuring the cohesion of rural communities and preserving cultural heritage. They produce the majority of the world's food, providing healthy,

diversified and culturally appropriate diets. They are major investors in the agriculture sector and the foundation of business and economic structures in rural areas, generating on- and off-farm job opportunities, and significantly contributing to the endogenous growth of the rural economy.

However, they are facing multiples challenges. In the region, where Family Farming is very diverse, spanning from full-time family members' farming with the support of wage labor, to small-scale and subsistence farming, the rural population is ageing, with young farmers and men migrating and threatening the generational sustainability of food systems. Many small-scale farmers, fishers, indigenous peoples and pastoralists are displaced due to the lack of legal recognition of their customary tenure rights. While the process of tenure reform has been slow in some countries, in others there has been a significant transfer of forestlands to family farmers and positive policy changes in their favor. Women have limited access to productive resources and opportunities (land, livestock, labour, education, extension and financial services, and technology), which limits their capacity to generate marketable surpluses and add value to their production, but also limited income received from their work on the farm (barely 20% of the family's farming income while providing up to 85% of the work).

To play a key role in the establishment and management of sustainable food systems, Family Farming needs an enabling policy environment that turns its whole potential into reality and tackles current challenges. Enabling policies for family farmers must address the root causes of rural poverty, food insecurity, migration and environmental degradation. This requires a multidimensional and integrated approach: a coherent strategy to support Family Farming transcends agricultural policies, as helping small-scale food producers improve productivity is not enough. Enhancing capacities of governments, institutions, producer organizations and researchers to design and implement integrated family farming and rural development strategies is paramount. This implies looking at more complex sets of objectives, including securing access to land and other natural resources, achieving gender equality, enhancing market opportunities, reducing costs and inputs dependency, guaranteeing universal social protection coverage, promoting strong organizations, increasing resilience from natural and economic shocks, and adapting to climate change.

2. The United Decade of Family Farming (UNDF), 2019-2028

Family Farming has been gaining global attention since 2014, which was designated the United Nations' International Year of Family Farming (IYFF). By dedicating an International Year to family farming, the United Nations repositioned family farming at the centre of agricultural, environmental and social policies in national agendas and achieved a shift towards a more equal and balanced development. The IYFF fueled a robust process of political dialogue among the 197 Member States of FAO, involving all relevant actors, which resulted in the formulation of national and regional policies, programmes, activities, and institutional arrangements in support of family farming. Multi-actor platforms, including around 50 National Committees on Family Farming (NCFF), have been created for policy dialogue, stimulating strong political commitment in favour of family farming (high-level political declarations and civil society mobilizations at national and regional levels). In light of the achievements of the IYFF, and as a result of the ensuing IYFF+10 campaign launched on 20 December 2017, the United Nations General Assembly proclaimed 2019-2028 as the UNDF at its 72nd Session (UNGA Resolution A/RES/72/239).

The United Nations Decade of Family Farming 2019-2028 was officially launched in Rome, Italy, on May 29, 2019 by IFAD and FAO. It serves as a framework for countries to develop public policies and investments to support family farming from a holistic perspective, unleashing the transformative potential of family farmers to contribute to achieving the Sustainable Development Goals (SDGs). The UNDF mobilizes global commitment and actions towards economic, social and environmental dimensions, focusing on innovation, knowledge sharing, capacity building, tailored technology and access to markets as the basis to formulate impactful actions and strategies. By placing family farming at the centre of the international agenda for a period of ten years, this Decade of Family Farming provides an unprecedented possibility to achieve positive change throughout global food systems.

3. The Global Action Plan (GAP) Seven Pillars and National Action Plans (NAP)¹

To guide the implementation of the UNDF, a Global Action Plan (GAP) was developed through a systematically organized 6-month-long consultation

¹ Based on FAO and IFAD. 2019. *United Nations Decade of Family Farming 2019-2028. Global Action Plan. Rome*

process including all relevant stakeholders. It identifies seven pillars of action to design policies, programs and regulations for the support of family farming and it provides a comprehensive framework to guide actions to be taken by the various actors at different levels in the next ten years.

The GAP provides an extensive list of activities through various modalities of action, including: data collection pertaining to specific issues, advisory and extension services, and communication and advocacy activities tailored to target groups. Developing the capacities of family farmers and other stakeholders across a wide spectrum must be reinforced as a key component, along with strengthening inclusive governance mechanisms. These activities can provide a base for appropriate and adequately financed public policies that support family farming.

According to the pillars of work presented above, an enabling policy environment (Pillar 1) needs to be in place to achieve and sustain progress in food security and nutrition. This enabling environment can provide a framework for specific strategies and interventions tailored to family farming groups facing distinctive economic, environmental and social realities, and equipped with various assets.

To guarantee the future of family farming while building on the essential contribution of women to agriculture, transformative actions must be taken to incentivize the active engagement, and the leadership and socio-economic inclusion of youth and women. Activities to ensure the generational renewal (Pillar 2–Transversal) and to promote gender equity and equality (Pillar 3–Transversal) in family farming will be mainstreamed in all the other work pillars.

Providing tailored support to organizations of family farmers (Pillar 4) is paramount. This includes all the various sectors of food producers, such as farmers, fishers, pastoralists, forest users and indigenous peoples. This is essential not only to enhance and amplify sustainable food production practices, or to strengthen their capacity to access and generate economic opportunities, but also to empower them to better access necessary resources, services and markets and to bolster their collective action to participate meaningfully in negotiations and policy processes.

Helping family farmers increase their productivity is not enough. Reflecting the diversity of family farmers and improving their livelihood and economic viability in a manner that enables them to escape poverty—a focus on the provision of the minimum requirements for the households of rural family

farmers—is also required (Pillar 5). Specific steps are essential to promote sustainable food production, processing and distribution practices in agriculture, livestock, fisheries and aquaculture, and forestry (Pillar 6) and, further, to support the multifunctional nature and performance of family farming, which provide services to food production, nourishing cultures and agro-biodiversity and providing diversified rural economic opportunities (Pillar 7).

While developing the intervention under the specific pillars, actions are to be adapted and contextualized according to concrete regional, national and local (territorial) geographical, agroecological, sociocultural and socioeconomic conditions. Moreover, as a precondition for the successful implementation of the UNDF, a bottom-up approach is recommended, in participative and inclusive processes, placing family farmers at the forefront. While encouraging multi-actor collaboration at all levels, the Global Action Plan also invites all actors to revise their specific roles and responsibilities vis-à-vis the support of family farming and increasing the sustainability of our food systems.

At regional and country levels, Action Plans are contextualized frameworks of actions for the support of family farming. These context specific action plans promote inter-institutional cooperation aimed at the integration of specific family farmers' issues into policies and strategies related to the wider food and agriculture sector. They encourage the integration of broader social and environmental sector considerations into dedicated policies for family farmers.

At national level, National Action Plans (NAPs) provide a roadmap for countries to progress in the implementation of the UNDF and an inclusive umbrella for all relevant national stakeholders to consolidate, align and reinforce their actions in support of family farming.

Actions Plans are developed, promoted and implemented through inclusive and multi-stakeholder approach including Governments, FAO, IFAD, Producers / Farmers Organizations and other relevant actors.



Figure: Seven Pillars of Global Action Plan of the UNDF

Source: FAO & IFAD (2019)

4. Constraints and Challenges in Achieving Targets of the UNDFE

Overall, challenges and constraints related to achieving the targets of the UNDFE relate to the different steps to develop and implement the National Action Plan. One can summarize this process in the following stages: i) Mobilization of Stakeholders; ii) Drafting process; iii) Official adoption; iv) Implementation phase.

Technical and financial assistance are often a limiting factor for meaningful inclusion of all stakeholders and full implementation of the NAP.

Additionally, COVID-19 pandemic has also brought a whole new set of challenges and threats to family farming, resulting in a potential delay for achieving the UNDFE targets. Family farmers, especially those operating at a small-scale level, are particularly exposed to the effects of pandemics. They might be considerably disadvantaged due to the temporary movement restrictions hindering their access to markets, and as perishable goods and small animals - mostly produced and kept by family farmers – are the most affected by being cut off from markets and slaughterhouses. In addition, family farmers' market access can be also undermined due to the change in consumers' behaviours, the closure of farmers' markets and commercialization channels such as schools and other procurement opportunities. Family farmers lacking storage facilities face serious risks of losing their products (FAO, 2020). Thus, mobility constrains and change in the policy agenda due to COVID-19 could severely affect the NAP and RAP processes.

5. Progress on UNDFE Targets²

By 2024, the goal, worldwide, is to develop 100 NAPs, 5 Regional Action Plans and 7 Sub-regional Action Plans by governments/ in dialogue with family farmers' organizations and /or with National Committees of Family Farming.

As of March 2021, 1 400 public institutions, Farmers Organizations, NGOs, and academia are engaged in the processes and have resulted to:

²Based on progress report elaborated by WRF as part of LoA on "Mapping processes at national, sub-regional and regional levels enhancing the implementation of the United Nations Decade of Family Farming 2019-2028 (UNDFE) and developing the roadmap of actions for women's empowerment in family farming"

- Advanced draft Regional Action Plan for Near East and North Africa (NENA).
- Drafting process of Regional and Sub-regional Action Plans started in Central America (SICA-CAC) and Central Africa (ECCAS).
- Mobilization in regional spaces in South America (REAF and CAS), West Africa (ECOWAS) and Asia (ASEAN and SAARC).
- Seven NAPs already approved: Dominican Republic, Gambia, Indonesia, Peru, Costa Rica, Nepal, and Panama.
- Eight countries with advanced processes (drafting phase): Bangladesh, Bolivia, Burkina Faso, Cote d'Ivoire, Madagascar, Philippines, Sierra Leone, Togo.
- Thirty-Six countries with progress in mobilizing actors for elaborating their NAPs: Albania, Brazil, Burundi, Cambodia, Cameroun, Chad, Centro African Republic, Colombia, Czech Republic, DR Congo, Ecuador, El Salvador, Eswatini, Gabon, Ghana, Guinea, Guinea Bissau, Honduras, India, Japan, Kenya, Kyrgyzstan, Lao PDR, Lesotho, Liberia, Mali, Mexico, Niger, Nigeria, Paraguay, Portugal, Republic of Congo, Senegal, Spain, Tanzania, Uganda.

6. Recommendations to Achieve UNDF

Throughout RAP and NAP development, a full engagement of FAO and IFAD is necessary to be able to guarantee a genuine commitment from the government and a full inclusion of all stakeholders (farmer's organizations, NCF, etc.).

Technical and financial assistance is also critical to support the organization of consultations, the drafting process and the implementation of the National Action Plans of Family Farming.

Robust mechanisms for following up and monitoring the implementation of the NAP are essential. It requires the development of operational plans providing sound information on the governmental programs, and generating a space to evaluate the progress in the implementation of the NAP. It is important that such mechanisms align with other monitoring and reporting mechanism already in place at country level.

Lastly, it is also worth noting that the GAP and more importantly, its national adaptation and implementation, remain a valid, although not exclusive, framework for dealing with the current pandemic. It can serve as a framework to strengthen family farmers' resilience to COVID-19 crisis since

it provides key actions that can contribute to mitigating the immediate impacts of the pandemic on family farmers, and provide a guide in revamping rural economies and societies in the medium run (FAO, 2020).

It is however necessary to adjust to the “new normal” and develop new ways to support policy dialogue, such as the online events and meetings. It is also very important to consider Family Farmers and their organizations as key actors and partners in the recovery process and the national recovery plans that are being developed. This provides a unique opportunity to build upon existing processes and new initiatives at national and regional levels.

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Chapter 8

Pillar 1

Develop an Enabling Policy Environment to Strengthen Family Farming in South Asia

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Abstract

Enabling policy environment is a critical and intertwining issue to address family farming in South Asian countries, where the economy and the livelihoods is relying on agriculture and more than 60% of the farms are smallholders. This action plan for the pillar 1 “Develop an Enabling Policy Environment to Strengthen Family Farming” has been prepared based on contextualization of the Pillar 1 of the Global Action Plan (GAP) of the UNDF and literature review. It is expected to guide South Asian countries to formulate and enact the relevant policies to strengthen family farmers in the region. The policy recommendations are emphasizing access to reliable data system; enacting farmers’ rights; access to quality farming inputs and financial resources; increase economics of scale in production and marketing; inclusive, sustainable and efficient value chain development; adoption of sustainable and climate resilient approaches; and a policy framework on food system transformation towards food safety, nutrition and health. Last but not least, as mentioned in the GAP, a critical pre-requisite for sound and inclusive enabling policy environment to strengthen family farming is also to guarantee the participation of all stakeholders, especially family farming organizations and Civil Society Organizations to all policy development processes.

Keywords: Policy, enabling environment, family farming, South Asia

1. Background

The UN Decade of Family Farming (UNDF) envisions “A world where diverse, healthy and sustainable food and agricultural systems flourish,

where resilient rural and urban communities enjoy a high quality of life in dignity, equity, free from hunger and poverty” (FAO & IFAD, 2019). Family farming “is a means of organizing agricultural, forestry, fisheries, pastoral and aquaculture production which is managed and operated by a family and predominantly reliant on family labor, including both women and men. The family and the farm are linked, co-evolve and combine economic, environmental, reproductive, social and cultural functions” (FAO, 2013).

This model is paramount for ensuring food security and nutrition, healthy and diverse diets, and poverty reduction in all its dimensions. Family farmers represent more than 90% of the agriculture farms and contribute by about 80% of the world food in value terms, and it is more prevalent in the South Asian region. However, they are often hindered in their development by limited policy incentives and supports to access inputs (quality seeds, fertilizers, and finance); capacity building, knowledge and information systems; weak market access of their products. The United Nations proclaimed the UNDF in December 2017 along with a **Global Action Plan** formed by **Seven mutually reinforcing Pillars**. In this Chapter, we propose a regional action plan for the First Pillar “**Develop an enabling policy environment to strengthen family farming**” with a South Asia perspective. According to FAO & IFAD (2019), this pillar mainly focuses on building and strengthening supportive policies, investments and institutional frameworks for family farming at local, national and international levels. Furthermore, it emphasizes a sustained political commitment and investment by state and non-state actors in strong coordination and partnerships among international, regional, national and local governments to ensure and foster inclusive multi-actor and multi-sectoral participation in all policy development. Creating policy environment is imperative for strengthening family farmers in order to achieve Sustainable Development Goals (SDGs).

2. Constraints, Challenges and Opportunities

Family farmers are facing constraints due to non-conducive policy environment, which is briefly discussed below:

- i) Dearth of reliable, timely and relevant data set to be used for formulating policies and programs regarding family farming at country and local levels. Institutional set up, institutionalization and capacity building for the data management system could help to formulate appropriate and reality-based policy planning for family farming.

- ii) Lack of political and financial commitment: more than 90% of the farms are owned by family farmers and they produce 80% of the world's food in value terms. However, family farmers need to be supported by political and financial commitment in terms of adequate resourcing, relevant policymaking, inclusive and effective governance, and institutional arrangements.
- iii) Family farmers are often constrained with lack of access to basic facilities and services including technology transfer and extension services. It needs for a complex set of integrated, multisectoral policies, strategies and programmes that address the economic, environmental, and social constraints family farmers and their communities face, this integrated approach requires coordination and governance mechanisms facilitating family farmers' linkages to other sectors.
- iv) Farmers are adopting traditional technologies and frequently struggling with effects of climate related extreme weather, consequently they harvest lower yields—push up towards food insecurity and vulnerability. Technology development on high yielding crop varieties having biotic and abiotic stress tolerance features is crucial for family farmers. Furthermore, family farming is encountered by climate related extreme stress by means of flash flood, land slide, hail stone, drought, uncertain rainfall, etc. Adoption of climate smart agricultural technologies could be the best approach to address climate related stress.
- v) Reduced economies of scale—family farmers operate agriculture in less than 2 hectares of land — that increased the cost of doing business and reduce the economies of scale in agriculture. Policies on family farmers' cooperatives to pull resources and capacity together as well as to foster bargaining power could contribute to increase economies of scale in production and marketing. Value chains in agriculture tend to be weak and farmers lack access to markets for their products. Inclusive, sustainable, and efficient value chain development could strengthen family farmers.

3. Review of Policies and Programs on Family Farming

The national policies of the SAARC Member States regarding smallholder family farming are presented hereafter:

Afghanistan, National Comprehensive Agriculture Priority Program Framework (MAIL, 2016) incorporates food and nutrition security, good

governance and economic development to achieve the core national objectives of self-reliance, increased income and employment generation.

Bangladesh, the National Agriculture Policy 2018 (MoA, 2018) and National Cooperative Policy 2014 are the major policies for promoting family farming in the country.

Bhutan, Food and Nutrition Security Policy 2014 (MoAF, 2014) to ensure the fundamental rights of Bhutanese for affordable, adequate, safe, nutritious and culturally acceptable food. In addition to that, other major policies are Cooperative Act 2009, National Forest Policy 2012, National Irrigation Policy 2012, Biosafety Act 2015, Seeds Act 2000, and Forest and Nature Conservation Act 1995.

India, Multi-state Cooperatives Act 2002, National Policy on Cooperatives, National Mission on Sustainable Agriculture, National Agroforestry Policy 2014, Pradhan Mantri Krishi Sinchai Yojana, Agriculture Contingency Plan, and National Initiative for Climate Resilient Agriculture are major policies to address family farming.

Maldives, Strategic Action Plan (2008-2013) (MOFA, 2009) supported farmers' cooperatives for subsidies in agriculture production, financial and technical assistance, processing, and marketing.

Nepal, major policies in the country are the Constitution of Nepal 2015, National Cooperative Policy 2017, Agriculture Development Strategy 2014 (2015-2035) (MoAD, 2015), National Agriculture Policy 2004, Agribusiness Promotion Policy 2006, Dairy Development Policy 2007, and National Tea Policy 2000.

Pakistan, Cooperative Credit Societies Act 1904, All India Cooperative Societies Act 1912, Cooperative Societies Reforms Order 1972 and National Food Security Policy 2018 (GoP, 2018) are important policies for strengthening family farming in the country.

Sri Lanka, the Cooperative Societies Act 1972, Agriculture Crop Insurance Act 1994, National Agriculture Policy 2000, Agrarian Development Act 2000 and the National Cooperative Policy 2019 are the prime policies in the country.

4. Regional Action Plan (Pillar 1) of UNDF

Enabling social, economic and political environment for family farmers to achieve the targets of zero hunger and poverty, sustainable and healthy food systems and resilience is a fundamental condition.

As introduced above, several issues hinder the development of appropriate policies supporting and addressing the needs of family farmers: access to reliable, relevant and timely data sets; promote farmers' rights; access to financial resources and inputs; adoption of improved technologies; responsive and accountable governance systems; and strengthen farmers' cooperatives for increasing economies of scale in production and marketing. Enabling environment is cross-cutting, multi-faceted, multi-sectoral and multi-stakeholders' issue. Scope of enabling environment may include policies (macro and micro policies), acts, rules, regulations, directives and programs, and associated resources to address the economic, environmental and social wellbeing and prosperity of the family farmers. According to FAO and IFAD (2019), the policy shift must be grounded on reliable, timely, and locally relevant data and evidence on the multidimensional performance of family farming and simultaneously looking at interconnected objectives for the whole food system.

Pillar 1. Develop an enabling policy environment to strengthen family farming

Expected Outcomes	Priority Policies	Priority Actions	Indicators	Time Frame	Responsible Institutions
1.1 Accessibility and availability of reliable, timely and relevant data to support policy making, monitoring, and evaluation of programs for strengthening family farming (FF) at the regional, national and sub-national levels.	<ul style="list-style-type: none"> ▪ Institutionalization of data management systems, to support research and policy analysis. ▪ Establish inclusive reliable, valid and regular data collection, processing and analysis systems. ▪ Conduct multi-dimensional, need based, strategic and participatory research on family farming for formulating evidence based policies. ▪ Capacity development for research, policy 	<p><u>Regional Level</u></p> <ul style="list-style-type: none"> ▪ Develop a framework for collecting, processing and analysis of data set on family farming. ▪ Develop a policy and program (including monitoring and evaluation) framework on inclusive, resilient and sustainable development for family farming at the regional level to guide the countries' programs. 	<ul style="list-style-type: none"> ▪ Framework/ guidelines on data collection, processing and analysis on FF. ▪ Framework/ guidelines on policy and programing on FF. 	2021-2022	<ul style="list-style-type: none"> ▪ SAARC Agriculture Centre, FAO, AFA, ICA.
		<p><u>National Level</u></p> <ul style="list-style-type: none"> ▪ Capacity building of the SAARC Member countries on data collection, processing and analysis to strengthen family farming. ▪ Institutional set up and institutionalization for data management and policy 	<ul style="list-style-type: none"> ▪ Numbers of trainings. ▪ Data collection and processing framework. ▪ Annual program progress report. 	2021-2023	<ul style="list-style-type: none"> ▪ Ministry of Agriculture. ▪ National Committee on Family Farming. ▪ FAO Country Offices

Expected Outcomes	Priority Policies	Priority Actions	Indicators	Time Frame	Responsible Institutions
	analysis and policy formulation at the national and sub-national levels.	analysis at the national and sub-national levels.			
1.2 Strong political and financial support and public awareness towards family farming for sustainable development.	<ul style="list-style-type: none"> ▪ Ensure continuous, meaningful, coherent and effective political and societal engagement. 	<p><u>Regional Level</u></p> <ul style="list-style-type: none"> ▪ Coordination with development partners to prioritize their activities towards family farming. ▪ Sharing knowledge and experiences of other countries on incentives related to policies, programs, acts, guidelines with regards to family farming. <p><u>National Level</u></p> <ul style="list-style-type: none"> ▪ Formulate policies, acts, guidelines, and directives in favor of family farmers. ▪ Conduct advocacy and awareness program for stakeholders and concerned publics to increase understanding on family 	<ul style="list-style-type: none"> ▪ Numbers of meetings and workshops of the development partners. ▪ Develop policy documents. ▪ Increase program budget for family farming. ▪ Increase support from governments, civil society, donor and development partners, NGOs/INGOs, CBOs for FF. 	2022-2028 (regular)	<ul style="list-style-type: none"> ▪ Ministry of Finance. ▪ Ministry of Agriculture. ▪ Intergovernmental organizations including FAO at the regional and country levels. ▪ Development partners. ▪ Farmers' cooperatives

Expected Outcomes	Priority Policies	Priority Actions	Indicators	Time Frame	Responsible Institutions
		farming and cross cutting issues. <ul style="list-style-type: none"> ▪ Develop guidelines for donors and development partners to streamline program and budget towards family farming. 			
	Better access to financial/ credits support with affordable interest rate and efficient administrative process to the family farmers.	<ul style="list-style-type: none"> ▪ Establish financial institutions in the rural areas. ▪ Adoption of digital financial systems for agricultural loan. ▪ Develop an agriculture loan disburse guideline that ensure the efficiency of loan availing process to FF. 	<ul style="list-style-type: none"> ▪ Guideline for agriculture loan. 	2021-2023	<ul style="list-style-type: none"> ▪ Ministry of Finance. ▪ Central Bank. ▪ Commercial Banks.
1.3 Inclusive and effective governance system for the design, implementation, monitoring and evaluation of comprehensive	<ul style="list-style-type: none"> ▪ Promote Farmers' Right to strengthen family farmers for sustainable, inclusive and resilient agriculture and food systems. 	<ul style="list-style-type: none"> ▪ Enact Farmers' Right Act coherent with coherent with "United Nations Declaration on the Rights of Peasants and Other People Working in Rural Areas- UNDROP at the country level. 	<ul style="list-style-type: none"> ▪ Enact Farmers' Right 	2021-2023	<ul style="list-style-type: none"> ▪ Ministry of Agriculture. ▪ Ministry of Law and Justice. ▪ Cabinet and Parliament.

Expected Outcomes	Priority Policies	Priority Actions	Indicators	Time Frame	Responsible Institutions
family farming-focused policy including protecting farmers' rights.	Improve the governance system to promote family farmers in program design, implementation, monitoring and evaluation.	<ul style="list-style-type: none"> ▪ Develop guidance for good governance to promote family farmers. ▪ Capacity building of the governments at all levels, family farmer organizations, youth and women, and other relevant actors to increase the logical participation in decision-making processes. 	<ul style="list-style-type: none"> ▪ Guideline for good governance. ▪ Number of trainings 	2023-2025 and ongoing	<ul style="list-style-type: none"> ▪ Ministry of Agriculture. ▪ Cabinet and parliament. ▪ Development partners.
1.4 Enhanced coherence and integration between family farming-related policies and legislations.		<ul style="list-style-type: none"> ▪ Conduct training and workshops. 	<ul style="list-style-type: none"> ▪ Number of training and workshops 	2024-2025	<ul style="list-style-type: none"> ▪ Ministry of Agriculture. ▪ FAO ▪ AFA
	Better access to agricultural production inputs for family farmers.	<p><u>National Level</u></p> <ul style="list-style-type: none"> ▪ Develop coherent and supportive policy frameworks to promote sustainable and climate resilient approaches such as Agroecology, Nature Based Solutions, Regenerative Agriculture, Climate Smart Agriculture and Livestock production. 	<ul style="list-style-type: none"> ▪ Number of policy framework developed 	2021-2022	<ul style="list-style-type: none"> ▪ Ministry of Agriculture. ▪ Private Sectors ▪ FAO ▪ Farmers Organizations.

Expected Outcomes	Priority Policies	Priority Actions	Indicators	Time Frame	Responsible Institutions
		<ul style="list-style-type: none"> ▪ Promote sustainable and climate resilient approaches such as the use of bio-inputs (fertilizers, composting, biocontrol agents), sustainable soil and water management, integrated pest management, conservation agriculture, agroforestry, system of rice intensification. 	<ul style="list-style-type: none"> ▪ Number of policy framework supporting the development of these approaches elaborated and implemented 		<ul style="list-style-type: none"> ▪ Ministry of Agriculture. ▪ Private Sectors ▪ FAO ▪ Farmers Organizations
	<p>Availability and adoption of improved seed varieties that is high yielding, stress tolerance and market driven.</p>	<p><u>Regional Level</u></p> <ul style="list-style-type: none"> ▪ Strengthen south-south and south-north, and multi-stakeholder collaboration. ▪ Knowledge sharing through training and workshops, etc. <p><u>National Level</u></p> <ul style="list-style-type: none"> ▪ Strengthen agricultural research institutions and building capacity of the scientist and technicians. ▪ Well-equipped laboratories. ▪ Develop improved varieties of crops. 	<ul style="list-style-type: none"> ▪ New improved varieties developed and adopted. ▪ Trained human resources. ▪ Increase productivities of major crops. 	<p>2022-2028</p>	<ul style="list-style-type: none"> ▪ FAO RAP ▪ SARC ▪ AFA ▪ ICA ▪ Ministry of Agriculture ▪ National research and extension systems.

Expected Outcomes	Priority Policies	Priority Actions	Indicators	Time Frame	Responsible Institutions
	<ul style="list-style-type: none"> ▪ Strengthened extension systems to disseminate improved technologies. 	<ul style="list-style-type: none"> ▪ Effective extension systems. ▪ Adopt pluralistic extension systems. ▪ Strong collaboration with private sectors, cooperatives, NGOs, and development partners. 	<ul style="list-style-type: none"> ▪ Increased coverage of the extension systems. 	2021-2028	<ul style="list-style-type: none"> ▪ Ministry of Agriculture, private sectors, cooperatives, NGOs, and development partners.
	<ul style="list-style-type: none"> ▪ Reduce the effects of climate change effects. 	<ul style="list-style-type: none"> ▪ Policy guidelines for the promotion of climate resilient technologies. ▪ Capacity building of family farmers, governments and private sectors. 	<ul style="list-style-type: none"> ▪ Policy guideline. ▪ Number of trainings. 	Regular	<ul style="list-style-type: none"> ▪ FAO, Governments
1.5 Enhanced economies of scale in production and marketing.	<ul style="list-style-type: none"> ▪ Strengthen family farmers' cooperatives across the value chain. ▪ Develop inclusive, sustainable and efficient value chain. 	<ul style="list-style-type: none"> ▪ Build strong linkage between production, processing and marketing. ▪ Capacity building of the FF cooperatives and value chain actors on technical and managerial aspects. 	<ul style="list-style-type: none"> ▪ Competitive products. ▪ Reduce marketing margin. 	Regular	<ul style="list-style-type: none"> ▪ Ministry of Agriculture. ▪ Local government, Family Farmers' Cooperative. ICA, AFA

5. Recommendations

Strengthening family farming required cross-cutting, multi-faceted and multi-dimensional policy measures with particular focus to cater intertwining constraints and challenges. In viewing the constraints and challenges as discussed in the previous section, following policy recommendations are made to create enabling environment in improving the wellbeing of family farmers in South Asia.

- Accessibility and availability of reliable, timely and relevant data management system at the regional, national and sub-national levels for rational and evidence-based policy formulation, monitoring, and evaluation to strengthen family farming.
- Strong political and financial policy support and public awareness towards family farming to sustainable development.
- Establish inclusive and responsible good governance system for comprehensive family farming-focused policy including protecting farmers' right.
- Ensure and foster inclusive multi-actor multi-sectoral participation in all policy development towards family farming.
- Enhanced enabling environment with coherent policies (agricultural production inputs, high yielding technologies / quality seeds, effective extension system, and agroecological and climate resilient approaches) in support of the family farming.
- Enhanced economies of scale in production and marketing through conducive policies on strengthening farmers' cooperative systems.

6. Conclusions

Creating policy environment in support of family farming is crucial for strengthening the smallholder family farmers in the South Asia. However, the SAARC Member Countries have their country specific policies for agricultural development; there is dearth of enabling policies particular to the family farmers. We recommend some important policy interventions such as promoting farmers' right, access to inputs, access to output markets, efficient and inclusive value chain development, and food system transformation towards safety, nutritious and health foods.

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Chapter 9

Pillar 2

Transversal. Support Youth and Ensure the Generational Sustainability of Family Farming in South Asia

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Abstract

Youth engagement and generational sustainability in agriculture is the top and foremost emerging issue in the least and developing countries as a larger number of youth and economically active population have been migrating from rural to the urban areas and abroad for seeking better opportunities. Consequently, rural agriculture is constrained by paucity of family labours- that led to generational gap in family farming. This paper has been prepared adopting secondary information and literature review- including UNDF and policies and plans of the SAARC Member States. Responsible and rational actions are imperative to support young people's engagement in agriculture and promote their active contribution to agriculture and rural development. This paper emphasizes on- adequate investment in the agriculture sector by promoting opportunities to rural youth through integrated approaches including education, decent employment and inclusive economic growth, and poverty reduction.

Keywords: Youth, generational sustainability, family farming, South Asia

1. Background

South Asia is one of the fastest growing regions in the world where agriculture plays fundamental role for economic and livelihood development. About 65% of its population live in rural areas. The region comprising of eight countries collectively known as 'SAARC' (Afghanistan, Bangladesh, Bhutan, India, Maldives, Nepal, Pakistan and Sri Lanka). SAARC is a populous region: home to 24.75% of the global population and

more than 40% of the world's poor. The region represents 28% of the world's agricultural population and 3.4% of the world's landmass.

As South Asia stands on the cusp of the Asian Century, its youth are at a crossroads. In 2010, the 15-24 age group comprised at least a third of the working population in each South Asian country, stressing the youth's impact on the economy in the region. In about a decade, the population of South Asia has become much younger, with its population under age 25 reaching 380 million in 2019 (FAO, 2016; FAO, 2014), nearly half of the global youth population at the time.

A youthful population tends to reap benefits for its country, as the youth are seen to drive savings and investments, as well as comprise a high-consuming market and an energetic workforce. With an increasingly youthful population, there is an unprecedented opportunity for young people to take an active role in shaping the region's future. The youth dominate the working age group in the region, but at the same time, they also comprise half of the region's unemployed.

2. Constraints, Challenges and Opportunities

The agriculture sector in SAARC countries has the potential to provide numerous employment opportunities in food production, marketing, processing, retail, research and, input sales, among others. And yet, the sector has not been able to retain or sufficiently attract youth. The following are the main challenges with respect to increasing rural youth's participation in agriculture in the region:

- i) **Insufficient access to knowledge, information and education-** Poor and inadequate education limits productivity and the acquisition of skills, while insufficient access to knowledge and information can hinder the development of entrepreneurial ventures (FAO, 2017). There is a distinct need to improve young rural women's access to education, and to incorporate agricultural skills into rural education more generally. Agricultural training and education must also be adapted to ensure that graduates' skills meet the needs of rural labor markets
- ii) **Limited access to land-** Although access to land is fundamental to starting a farm, it can often be difficult for young people to attain. Inheritance laws and customs often make the transfer of land to young women problematic, and so need amendment/s.
- iii) **Inadequate access to financial services-** Most financial service providers are reluctant to provide their services – including credit, savings and

insurance – to rural youth due to their lack of collateral and financial literacy, among other reasons. Promoting financial products catered to youth, mentoring programs and start-up funding opportunities can all help remedy this issue.

- iv) **Difficulties accessing green jobs-** Green jobs can provide more sustainable livelihoods in the long run and can be more labor intensive and ultimately involve more value added. However, rural youth may not have the skills (or access to the necessary skills-upgrading opportunities) to partake in the green economy.
- v) **Limited access to markets-** as without such access youth will not be able to engage in viable and sustainable agricultural ventures.
- vi) **Limited involvement in policy dialogue-** Too often young people's voices are not heard during the policy process, and so their complex and multifaceted needs are not met. Policies often fail to account for the heterogeneity of youth, and so do not provide them with effective support.

3. Review of Policies and Programs

Youth attract to agriculture only if farming becomes economically rewarding and intellectually stimulating. Appropriate policies need to be developed to make agriculture more attractive, profitable and a credible career to the youth through the application of appropriate and modern technologies. For instance in India, in line with Government of India's focus on programs like Start-up India and Stand-up India aimed at young entrepreneurs with new and innovative ideas, National Cooperative Development Corporation has formulated Yuva Sahakar - Cooperative Enterprise Support and Innovation Scheme 2019, which has an annual outlay of INR 100 crores (SEWA, 2020).

The inadequate level of generational turnover in farming is largely due to the lack of opportunities for on- and off-farm employment of youth in rural areas, resulting in the internationally observable demographic trend of farmers' ageing (FAO & IFAD, 2019). This is a major risk for the survival of the agricultural, fishery and forestry sectors, seriously affecting the composition of the rural labour force, patterns of agricultural production, land tenure, social organization within rural communities, and socio-economic development in general (FAO & IFAD, 2019).

Engagement of young people in farming is proved and widely recognized as a key driver to revive agriculture and rural development. However, youth

people are handicapped by multiple structural and institutional barriers-including the limited access to land, inadequate knowledge, information services, financial services, green jobs and markets and their limited involvement in policy dialogue. An integrated and coordinated response is crucial to address this complex challenges- and convert into opportunities. Appropriate policies along with legal framework to be formulated to provide youth with adequate access to information, education and vocational skills, productive assets and markets. Practical and skill-oriented training program to youth-farmers can significantly contribute to the generational sustainability of family farming.

Engaging youth in agriculture- they bring a number of resources-skills, networks, capital, technologies, marketing and management practices-allowing for innovation in the farming, fishing and forestry sectors (FAO & IFAD, 2019). Intergenerational collaboration along with combination of generation-specific (traditional and modern) knowledge and skills are important drivers for promoting youth in agriculture. In order to accelerating value-adding activities, both inter- and intra- generational learning processes are vital that will increase the economic stability and autonomy of young family farmers. It is essential to organize and bring youth together to improve their capacities to ensure generational renewal in family farming.

4. Regional Action Plan on Pillar 2 of the UNDFP

Considering the increasing rate of youth in South Asian countries and their constraints to enter into agriculture, it is the urgent need of the day to empower and inspire youth farmers with conducive policy environment along with clear and strategic action plan. Policy priorities to be given on-capacity building and skill development, provide access to inputs and ensure linking with output markets.

The below table details a roadmap to ensure generational renewal in family farming, to organize and bring youth together, and to improve their capacities for collective action. The effective participation of aspiring and young farmers in policy processes has the potential to reframe society's perception of family farming as a dynamic sector with constant renewal capacity. To facilitate generational turnover in agriculture, it is equally important to provide elderly farmers with necessary measures and social protection services supporting their retirement from farming and allowing them to grow old with security and dignity.

Table 1. Regional Action Plan of the UNDFP under Pillar 2

Expected Outcomes	Priority Policies	Priority Actions	Indicators	Time Frame	Responsible Institutions
2.1 Increased rural employment and reduced rural to urban forced/economic migration of youths.	2.1.1 Youth acting as agents of sustainable development and being involved in rural development.	<u>Country Level</u> Organize agricultural training camps for youths.	Number of youth in training camps.	7 years	IFAD, concerned national focal persons.
		<u>Regional Level</u> Promote the participation and leadership role of youths in rural organizations.	Number of youth leaders in rural organizations.	8 years	SAC, AFA, FAO-ROAP, ICA-AP
	2.1.2 Inclusive mechanisms to promote youth participation in decision making processes.	<u>Country Level</u> Promote the participation and leadership role of youths in policy making processes.	Number of youth awarded on public policies and their involvement in policy making processes.	5 years	SAC, AFA, FAO-ROAP, ICA-AP
<u>Regional Level</u> Promote knowledge sharing on public policies supporting and promoting young farmers.					
2.2 Improved capacity of young farmers on sustainable innovative practices interconnectin	2.2.1 Capacity development programs on technical skills for young family farmers and their	<u>Country Level</u> <ul style="list-style-type: none"> ▪ Intergenerational knowledge exchanges. ▪ Organize entrepreneurship development trainings for farmers. 	Number of entrepreneurs developed by family farmers.	8 years	Ministry of Agriculture, National Committee of FF
		Organize capacity development activities on value adding activities at farm level for better access to market and maximize profit.			

Expected Outcomes	Priority Policies	Priority Actions	Indicators	Time Frame	Responsible Institutions
g traditional knowledge with new solutions.	organizations provided	<u>Regional Level</u> Support for exposures (national and international) to learn different modern agro-techniques.			
2.3 Improved generational turnover in agriculture, fisheries and forestry.	2.3.1. Public policies and locally adapted facilities for the support of farm succession, farm start-up, etc. in place and implemented.	<u>Country Level</u> Provide supportive legal and financial measures to facilitate the intergenerational transfer of farming resources.	Number of countries where the legal framework developed incentivizing generational turnover in agriculture.	9 years	Ministry of Agriculture, National Committee of FF.
		<u>Regional Level</u> Promote inter-generational and intra-generational exchange of information, knowledge and practices on entrance into farming (farm succession, farm set-up, etc.).			

5. Recommendations

The challenges that the youth face in the agriculture sector (crop, livestock, fisheries (capture and aquaculture) and forestry) are daunting. Access to resources, including lands and loans, is limited, as the youth are discriminated against.

By investing in empowering and offering opportunities to rural youth, South Asian countries would simultaneously promote approaches on education (SDG 4), decent employment and inclusive economic growth (SDG 8), and poverty reduction (SDG 1). The results cut across several SDGs and across the three sustainability dimensions. In the mid-long term, keeping youth in rural areas by offering better life conditions and opportunities also reduces internal and international migration, as well as drivers for conflicts (SDG 16).

The following recommendations are made to support family farming (pillar 2) effectively in the region:

- Enabling youth through accessing land, information, education, other natural resources, infrastructure and financial services, markets and policymaking processes related to farming for sustainability of family farming.
- Stimulate young farmers to interconnect traditional, local knowledge with innovative ideas to become agent of inclusive rural development.
- Evidences show that the direct, peer-to-peer exchanges between food producers are among the most effective learning processes. It is therefore instrumental to incentivize those horizontal exchanges at different levels, to embrace the variety of formats (farmer-to-farmer, women farmer to women farmer, youth-to-youth learning exchanges, farmer field schools, field visits, learning journeys, mentoring courses, etc.), knowledge, skills (both practical and theoretical), processes and tools (from local communication to network/platforms) appropriate for family farming.
- Ensure the generational sustainability of family farming through enabling youth accessing land, other natural resources, information, education, infrastructure and financial services, markets and policymaking processes related to farming.
- Benefiting from the intergenerational transfer of tangible and non-tangible farming assets, stimulate young farmers to interconnect

traditional, local knowledge with innovative ideas to become agent of inclusive rural development.

- Develop a plan for institutionalizing youth development as a major college priority through such potential mechanisms as: interdisciplinary centers or institutes for youth development, a new thrust in one or two academic programs by institutes of higher learning, and linking existing outreach mechanisms of such institutes with existing state youth organizations and programs in agriculture.
- Emerging opportunity for youth is that of a 'Climate Risk Manager', a local and trained individual who understands various facets related to climate risks and their impact on agriculture and livelihoods.
- Facilitate generational turnover in agriculture, it is equally important to provide elderly farmers with necessary measures and social protection services supporting their retirement from farming and allowing them to grow old with security and dignity.

6. Conclusions

The inadequate level of generational turnover in farming is largely due to the lack of opportunities for on- and off-farm employment of youth in rural areas, resulting in the internationally observable demographic trend of farmers' ageing. This is a major risk for the survival of the agricultural, fishery and forestry sectors, seriously affecting the composition of the rural labour force, patterns of agricultural production, land tenure, social organization within rural communities, and socio-economic development in general.

The entry of young people into farming is widely recognized as a key driver to fostering the vitality of rural areas and competitiveness of agriculture. Nevertheless, those interested in farming are increasingly confronted by multiple structural and institutional barriers, including the limited access to land, the insufficient access to knowledge, information and education, financial services, green jobs and markets and their limited involvement in policy dialogue. A coordinated response to the complex challenges that youth face is more urgent than ever. Actions need to provide youth with adequate access to information, education and vocational skills, as well as to tangible and intangible productive assets and markets. Supporting legal and financial measures is key to facilitating the transmission of existing farms and to motivating the set-up of new ones. Distinct, youth-specific training and

education programmes can significantly contribute to the generational sustainability of family farming.

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Chapter 10

Pillar 3

Transversal. Promote Gender Equity in Family Farming and the Leadership Role of Rural Women in South Asia

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Abstract

Women comprise close to fifty percent of the agriculture labor force in developing countries, however, they face numerous social and cultural constraints, and have limited access to productive resources and services, as compared to their male counterparts. Among others, the lack of access to and control over land, capacity development opportunities, and financial services continue to undermine the achievement of sustainable, productive, and inclusive food systems, as well as zero poverty and zero hunger within the framework of the SDGs. Although the percentage is higher in other sub-regions, in South Asia about 35% of women perform agricultural works. Investing in bold actions that empower women farmers can increase the contribution of family farming and small-scale agriculture in poverty reduction and overall production, 20-30% more as pointed out by the Food and Agriculture Organization, and transformation of food systems to make them more sustainable and inclusive, thus, going beyond the increase in productivity. The UN Decade of Family Farming is an opportunity to unleash the potential of both women farmers and the agriculture sector in SAARC. Unless policies directed at promoting gender equity are implemented, the full potential of agriculture to contribute to poverty reduction and rural development and remains untapped. This chapter presents the regional action plan that will serve as a guide to member states as they developed their National Action Plans.

Keywords: Gender equity, gender equality, women farmers, agriculture

1. Background

Addressing gender gaps is essential to be able to successfully tackle other development challenges such as poverty, food insecurity, and malnutrition.

Through an extensive review of literature, the link between increasing women's land rights and poverty reduction has been established (Ignaciuk & Chit Tun, 2019). The opportunity to strengthen the link between agriculture and rural development in developing countries should be exploited. According to FAO if women can access the same productive resources as men, yield can be increased to 20-30% more. This means 2.5-4% of total output in agriculture. Addressing gender gaps will not only increase production but also affects the achievement of the SDGs/ sustainable food systems. Women comprise close to 50% of the agriculture labor force, however, they continue to face numerous social and cultural constraints, and have limited access to resources and services as compared to their male counterparts. These include women's lack of access to use and control over land and other productive resources, services, technology, market information, financial assets, financial services, technology, and job opportunities, among others. Unless policies directed at promoting gender equity in agriculture are implemented, unleashing the full potential of the sector to contribute to poverty reduction and rural development is not possible.

In Asia, on average 43% of farmers are women (Siddiqi). In South Asia, 35% of women are involved in farm works (ibid.) Ironically, women's involvement in agricultural work is barely recognized, even though their contribution is more than half of the total input. Up to 80% of agricultural work is performed by women in India and Bangladesh but they are considered unpaid family workers or paid laborers (up to 95%). In terms of land rights and land ownership, it varies but in general, men own the majority of the land resources of family farmers. In the Land Watch Asia, ANGO reported that in India, women own 14% of the land (Swaminathan, et. al., 2011 as cited in ANGO, 2016). While in Bangladesh, only 10 % of the land is owned by women, of which 26.61 % of landowners are women (Kieran et. al., 2015). About 9.7 % of Nepali women own land. In Pakistan, the %age is much lower, about 2 % of women own land (National Institute of Population Studies, Pakistan and ICF International, 2013 as cited in ANGO, 2016).

The United Nation Decade of Family Farming Global Action Plan or UNDFGAP (FAO & IFAD, 2019) highlighted the overall contribution of women in agriculture, which is also true to South Asia, that backs up the calls for bold and urgent actions to promote gender equity and leadership role of women.

“Women account, on average, for almost half of the agricultural labour force. They are essential achieving sustainable, productive and inclusive food systems, as well as zero poverty and zero hunger within the framework of the SDGs.”

“Women contribute to food systems not only with their labour but also with their knowledge of agricultural practices and biodiversity. They engage in on- and off-farm activities and play a central role in natural resource management and food production, processing, conservation, and marketing. Rural women diversify income sources and ensure food security, nutrition and well-being for their families and communities.”

“Rural women also play a unique role as service providers and resilience builders: they combine income-generating work with unpaid household responsibilities, such as caring for children and the elderly. When women control additional income, they spend more than men do on food, health, clothing, and education for their children, with positive implications for immediate well-being as well as long-run human capital formation and the building of resilience strategies.”

2. Constraints, Challenges, and Opportunities

As clearly stated in the UNDF GAP, women's contribution to agriculture is significant, but still, they are *“the most affected by poverty, social exclusion, and are more likely to not see their basic human rights respected.”* Despite the existing challenges and needs, there are opportunities and prototypes to learn from as clearly shown in several countries through social enterprises, collective action, and social movements.

The challenges women face varies from country to country. The following are the common challenges faced by women in South Asia:

- i) **Women continue to face structural and cultural barriers-** Cultural traditions influence the roles women play in societies and how women are perceived. In many Asian countries, sons are preferred to daughters. Traditionally, patriarchal societies view women as subordinate to men. Decision-making is ascribed to men. Women's roles are most often limited to reproduction, domestic work, and family care. In rural areas, women also provide free labor. In some cases, they are poorly compensated. This situation hampers their ability to accumulate assets and resources, further pushing them to be dependent on men.
- ii) **Women have limited access to productive resources, technologies, and agricultural services-** In South Asia, the major inheritance and land

management system is largely patrilineal, where land is inherited by sons. Moreover, it is much more difficult for women to have access to educational and capacity-building support, market, and other services that are crucial to succeed in agriculture. Limited access to education hinders women and girls from improving their knowledge and skills.

- iii) **Women carry multiple burdens-** Women perform various tasks such as household chores, family care, and farm activities. Their role and responsibility in agriculture have broadened overtime because opportunities opened up for men in urban areas. Their lack of education, training, and the cultural factors that limit their mobility require them to exert additional effort to respond to these realities.
- iv) **Women are under-represented in local and national institutions and governance mechanisms-** The representation and participation of women in the political sphere remain negligible. Thus, gender issues are not addressed in policies and programs. Policies and program are often gender blind, does not consider the different realities of men and women in societies.

3. Review of Policies and Programs

Laws and programs, which vary in scope and attributes, that aim to empower women farmers exist in all SAARC member states. In their book, Ali, Y., Shrestha, R. B., Bokhtiar, S.M., & Jahan, F. N. (2019) compiled country studies that include a review of existing laws and programs supporting women in agriculture.

In Bangladesh for example, the National Agriculture Policy (2018) supports the empowerment of women through its emphasis on family nutrition, capacity building of women farmers, and access to technologies. Bhutan's Food and Nutrition Security Policy 2014 supports women's participation in agro-based and non-farm rural enterprises for economic empowerment. India has invested a significant amount of resources to support mainstreaming schemes and programs targeting women. The government has allocated a substantial amount of funds for such activities. To support the capacity building of women, a National Gender Resource Centre in Agriculture has developed programs not just focusing on skills but also on changing mindsets. Maldives has the Decentralization Act 2010 that requires local councils to establish Women's Development Committees (WDC) at the island level. In its Agriculture Strategic Action Plan of 2019-23 (SAP) there are specific initiatives that target women. The involvement of women is

ensured in training and extension programs. Moreover, several policies support women's empowerment in agriculture. In Nepal, support for women is embedded in different policy documents such as the Constitution of Nepal's Fifteenth Periodic Plan (2019), Agribusiness Promotion Policy, and the National Agriculture Policy (2004). The Fifteenth Periodic Plan intends to “create equal access of women in resources, means, opportunity and benefits establishing them in a leadership role”. Meanwhile, the National Agriculture Policy aims to achieve 50% women participation in every agricultural program. Pakistan's Agriculture Policy of Punjab (2018) mentioned that rural women and youth as key beneficiaries of policy interventions to achieve inclusive growth in the agriculture sector.

4. Regional Action Plan under the Pillar 3 of UNDF for Strengthening Family Farming

The Regional Action Plan is a result of the virtual consultation held on November 5-6, 2020 attended by representatives of member states and non-government organizations. It will serve as a guide for SAARC member states as they develop their National Action Plans. The Regional Action Plan has adopted four outcomes: i) Recognition of women farmers as equal players in the agriculture sector; ii) 3.2 Improved women farmers' agency; iii) Increased capacity of women farmers to organize and participate in the decision-making processes through their organizations; and iv) 3.4. Reduce all kinds of violence against women and girls in family farming and rural areas. For each outcome, there are recommended policy innovations that will be localized and further developed by member states. Regional level activities are outlined that will be anchored by SAC, AFA, and other regional partners. The activities will be undertaken from 2021- 2028. Indicators are also presented and will be the basis of monitoring and evaluation.

Table 1. Reginal action plan of the UNDFP under Pillar 3

Expected Outcomes	Priority Policies	Priority Actions	Indicators	Time Frame	Responsible Institutions
<p>3.1. Recognition of women farmers as equal players in the agriculture sector</p>	<p>3.1.1. Support the enactment/ amendment of national policies and programs that will result in:</p> <ul style="list-style-type: none"> ▪ full engagement of women in agri-food supply chains ▪ participation in the decision-making process ▪ leadership roles (beyond the numbers) ownership management and ▪ enhanced access to social rights, education, health, and social protection for women. 	<p>1. Multi-Sectoral Round Table discussion at the region and intentionally designed for participants to recognize the legal framework and hurdles.</p>	<p>Number of legislations and programs enacted and amended that would enhance the engagement of women in agri-food value chains, their participation in decision-making processes, and their access to social rights.</p>	<p>2021--2028</p>	<p>SAC, AFA, and other regional partners</p>
		<p>2. Draft Concrete Recommendations, which may include policy reforms/change, innovative programs, and guidelines that will address the needs and aspirations of rural women.</p>			
		<p>3. Awareness-raising activities on the productive work by rural women, the contribution of rural women to family farming, and how gender equality at home, on the farm, and in their community helps eliminate poverty, malnutrition, and food insecurity.</p>			
		<p>4. Support research studies by national multi-stakeholder groups</p>			

Expected Outcomes	Priority Policies	Priority Actions	Indicators	Time Frame	Responsible Institutions
		<p>capturing women’s voices which can translate them to policy and program.</p> <ul style="list-style-type: none"> ▪ Women farmers' conditions, needs, and demands ▪ Gender-based constraints assessment - supply chain ▪ Legal provisions required to reduce the gaps <p>5. Lobby and organize strategic capacity building activities for legislators/ lawmakers and government program planners in the member states to enact needed policy and program reforms such as:</p> <ul style="list-style-type: none"> ▪ Gender-responsive policy and program ▪ Gender-sensitive budgeting ▪ Efficient services for the Family Farming program ▪ Special Provision and standards for gender equity/equality ▪ Processes to ensure Active and qualitative “participation” of women – not just in numbers, quality of participation of women. 			

Expected Outcomes	Priority Policies	Priority Actions	Indicators	Time Frame	Responsible Institutions
		<p>6. Implement Monitoring and Evaluation Plan in a participatory manner, for policies and programs specific to women's recognizing them as farmers who are managers and owners of their farms and resources.</p>			
<p>3.2 Improved women farmers' agency and increased access to natural resources, (re-)productive assets, information, infrastructure, financial services, and markets.</p>	<p>3.2.1 Amend and ensure implementation of women-centric policies such as Land Use and Land Reform that will improve access, control, and tenure security of women over natural resources are amended and well implemented. 3.2.2 Ensure Policy measures placed and implemented which facilitate access to productive assets, financial services, and markets for women in</p>	<p>1. Promote legal and institutional framework where women and girls have equal access, control, and tenure rights to land and natural resources independent of their civil and marital status and recommend policy tools and programs specific to women farmers so they will have access and control to productive assets, over water and energy resources, agriculture information and education, women-friendly capacity building program (responsive to their needs and burdens), financial services, infrastructure, and women-</p>	<p>Number of amended policies that are women-centric Number of policy measures in place that facilitates access to productive assets, financial services, and markets.</p>	<p>2021-2026</p>	<p>SAC</p>

Expected Outcomes	Priority Policies	Priority Actions	Indicators	Time Frame	Responsible Institutions
	family farming in place and implemented.	friendly and labor-saving technologies.			
		2. Initiate/organize a Regional network of Women Farmers/family farmers to strengthen their market access. 3. Organize Regional Exchange Program for women farmer leaders (women- friendly technologies and financial services models).	Number of regional network of women farmers strengthened	2022-2023	AFA and other regional organizations
3.3. Increased capacity of women farmers to organize and participate in the decision making processes through their organizations	3.3.1 Strengthen/ promote Cooperative Laws that will facilitate proliferation and strengthening of farmers' cooperative and supports women's participation in decision-making processes. 3.3.2 Capacity building programmes to empower women and their organizations.	1. Advocate for farmers' cooperatives and agri-based enterprises development as a strategy to address rural poverty with specific emphasis on multiple gains if women can access resources through their organizations.	Number of legislations, programs that promote the strengthening of women enterprises and cooperatives Number of of programmes that aim to build the capacity of women	2021-2026	SAC, AFA

Expected Outcomes	Priority Policies	Priority Actions	Indicators	Time Frame	Responsible Institutions
		<p>2. Advocate for capacity building support.</p> <ul style="list-style-type: none"> ▪ Technical capacity-building programs -production, processing, marketing, and use of ICT. ▪ Enterprise development and management – financial, business planning and business management, sustaining enterprises. ▪ Essential leadership and organizing skills - on leadership and advocacy skills to achieve meaningful participation in policymaking, implementation, and monitoring processes. <p>3. Advocate for <u>gender-sensitive rural advisory and extension services</u> to improve women’s inclusion in activities along the supply chain. As part of extension service mechanisms: promote the development of a coordinating committee within governments focused on family farming with women as key participants.</p>	<p>to govern and manage enterprises</p>		

Expected Outcomes	Priority Policies	Priority Actions	Indicators	Time Frame	Responsible Institutions
		4. Organize regional leadership conference for women farmer leaders.	Number of regional leadership conference for women farmers.	2022-2026	SAC, AFA, and other regional partners
3.4. Reduce all kinds of violence against women and girls in family farming and rural areas.	<p>3.4.1 Policies, programs, and institutions to prevent, denounce, protect and assist the elimination of violence against women implemented.</p> <p>3.4.2 Awareness-raising campaigns of the effects of gender violence on the life of rural women in place.</p>	<p>1. Produce information, statistical data, and studies on violence against rural women.</p> <p>2. Regional consultation to understand and unravel violence of women along the agri-food value chain. This will be targeted to institutions assisting rural women</p> <p>3. Develop a communication plan and hold campaigns concerning the effects of gender violence on the life of rural women.</p> <p>4. Promote the adaptation of global guidelines by member states and advocate for mechanisms to ensure its implementation.</p>	<ul style="list-style-type: none"> ▪ Number of publications. ▪ Number of events related to achieving outcomes. 	2022-2024	SAC, AFA, and other regional partners

5. Recommendations

- Stakeholders through various platforms at the country-level should support the enactment of gender-sensitive laws and implement programs that address women's access to, use of, and control over land and other productive resources. These laws are crucial to create an enabling environment for women to be active players in achieving food security and economic growth in rural areas.
- Advocacy campaigns and awareness-raising at the regional and national levels on women's rights and their contribution to agriculture and food systems transformation must be strategically planned. This will open the opportunities for women to access agricultural services and participate in agri-food value chains. The awareness-raising Aiming at transforming gender rules, which could be achieved by working with both women and men.
- Investment to strengthen women's organizations is fundamental to ensure access to education, training, financial services, and other agricultural services; and participation in decision-making processes. Increasing individual capacity also means allowing women to realize their potential. As a collective, women enterprises contribute to the rural economy as they can increase income and create jobs. Increase women's income also means better nutrition for their families. Beyond this, strong women's organizations can actively participate in policy and program formulation at the local to national levels. Mechanisms for women to participate must be created and institutionalized.
- Gender mainstreaming, use of gender-sensitive approaches, and integrating a gender equality perspective at all stages and levels of policies, programs and projects will allow taking into account women and men's different needs and living conditions and circumstances, including unequal access to and control over resources, power, and capacities. The aim of gender mainstreaming is to consider these differences when designing, implementing, and evaluating policies, programs, and projects so that they benefit both women and men and do not increase inequality but enhance gender equality.
- Participation of women in planning, implementation, monitoring, and evaluation of programs is critical to the program's success and inclusion of women's needs and aspirations.

- Create opportunities and platforms for women to participate in dialogue and learning exchanges. This is particularly important to release the leadership potential of women farmers. Learning exchange can be in the form of study programs, farmer-to-farmer exchange, field visits, and virtual forums.

6. Conclusion

The number of women in family farming and their contribution is paramount that it can influence outcomes of the agricultural and rural development program. A sustainable and inclusive transformation of the food system can only be achieved if women farmers are given the possibility to display their full potential. Closing the gender gap requires first and foremost recognition of women's rights and values, and concerted effort of individuals, groups, and institutions. An enabling environment, gender-sensitive, and appropriate policies and instruments, and inclusive processes all play an important role in achieving the outcomes of Pillar 3.

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Chapter 11

Pillar 4

Strengthen Family Farmers' Organizations and Capacities to Generate Knowledge, Represent Farmers and Provide Inclusive Services in the Urban -Rural Continuum in South Asia

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Abstract

Family Farmers' organizations (FFOs) play a significant role in ensuring vibrant, inclusive, progressive rural societies through a gamut of multi-faceted services: organizing, federating, building solidarity with the millions of small scale farmers, education and social awareness/conscientization, accompanying members in promoting their rights as farmers, individuals and citizens, providing services to improve production, value addition, marketing and distribution as well as to access the programs and services of government and other development partners. However, many FFOs in South Asia currently face challenges as they are fragmented, with weak capacities and weak recognition from government and other partners, and with inadequate policies to support the fulfillment of their roles. Pillar 4 in the Global Action Plan of the UNDF, as well as the first draft of the regional action plan in this paper, provides a guideline for FFOs, member states, development partners and civil society on how we can strengthen the capacities of FFOs so that it can represent farmers' concerns, provide effective and inclusive services, and generate knowledge from their work. This guideline can be a reference for a roadmap that each country and the region can take.

Keywords: Family farming, family farmers' organizations, empowerment, farmers groups, self-help groups

1. Background

The following discussion is largely lifted from the discussion on Pillar 4, contained in the global action plan of the United Nations Decade for Family Farming (UNDF) (FAO & IFAD, 2019).

1.1 Who are Family Farmers Organizations?

Family farmers are getting organized all around the world according to their environmental, economic, social and political realities to adequately respond to the multiple challenges they face. Based on specific demands and needs, farmer organizations emerge in a wide diversity of forms, including formal or non-formal networks, farmers' associations, agricultural cooperatives, social movements among others, in order to improve the livelihood, economic situation, access to services and the recognition of their members both in public policies and by the society.

1.2 What Roles will Family Farmers Organizations Play for the Implementation of the UNDF?

Concrete experiences show that when farmers get organized and strengthen their collaboration, together, they achieve better results, while reducing inequalities through longer-lasting solutions. Organized farmers can contribute to policy change, linking local solutions to national and global goals and challenges such as the SDGs and climate change. By playing a catalytic role to improve family farmers' opportunities to access their rights, agricultural resources, public services, and policies, and to access markets, family farmers' organizations become the backbone of vibrant and inclusive rural societies. It is therefore of key importance to recognize this role and to take particular actions to stimulate the development of new and strengthen already existing organizations of family farmers at all levels, enhancing their capacity to promote and articulate new services in many different areas according to their views and the requests of the members. Family farming is multi-dimensional; accordingly, family farmers' organizations can carry out several functions linking their members to many public services they may not be aware of or be able to access easily.

Beyond food production, family farmers' organizations carry out education, business development, communication, insurance, cultural or health services for their members, arrange childcare and support elderly people in their communities. These services provided at local level are fundamental, as they are often the only accessible ones for the rural population.

Organizations of family farmers play an important role to further strengthen the capacities of their members in a variety of areas, including the use of sustainable production and processing practices, entrepreneurial and business management skills, capacities to better engage in policymaking processes and to better access markets.

When family farmer organizations come from endogenous process and rely on a strong internal structure, they are more likely to be successful in advocating and engaging in dialogue with other actors. Catalyzing collective actions, in particular, to improve family farmers' and their organizational capacities to meaningfully participate in developing, improving, implementing and monitoring policies for their benefits, can guarantee that policies will really reflect their needs and will provide well-tailored interventions for them, contributing to sustainable territorial development.

1.3 What Are Essential Features of an Effective Family Farmers Organizations?

While acknowledging the diversity of environmental and political contexts, this work has to respect the autonomy and self-organization of family farmers as a key principle. To build sustainable and effective family farmer organizations, it is essential that those create and maintain dynamic linkages to external actors, consumers, decision makers, among others both in rural and urban areas.

Solidarity, transparency and respectful, equitable internal relations and a governance mechanism can be considered fundamental elements for the development of strong rural organizations. It is essential that internal strategies of the organizations are anchored in the territories and/or landscapes, recognizing the spatial, environmental, social and cultural diversity of development opportunities.

1.4 How Can We Support Family Farming Organizations So They Can Play Their Roles?

Evidences show that the direct, peer-to-peer exchanges between food producers are among the most effective learning processes. It is therefore instrumental to incentivize those horizontal exchanges at different levels, to embrace the variety of formats (farmer-to-farmer, women farmer to women farmer, youth-to-youth learning exchanges, farmer field schools, field visits, learning journeys, mentoring courses, etc.), knowledge, skills (both practical

and theoretical), processes and tools (from local communication to network/platforms) appropriate for family farming.

Another important dimension of the structural transformations affecting family farming and rural livelihoods is the role that communication and the new technologies play in facilitating access to knowledge and information and allowing family farmers and their organizations to make their voices heard. Dedicated rural communication services greatly advance economic, environmental and social dimensions of family farming (e.g., shortening the value chains linking producers to market; improving resilience and climate change adaptation through community-based early warning systems; and supporting farmer-lead advisory services for inclusive innovation). It is therefore compelling to enhance farmer organizations' capacities to promote and deliver new types of rural communication services to improve linkages with their male and female members and rural institutions, and to engage young farmers in innovative and sustainable family farming.

1.5 How will this Pillar Contribute to the Achievement of the SDGs?

By operating in this pillar, countries can ensure that no one is left behind, the core commitment of the 2030 Agenda. As spelled out in several SDG targets (particularly under SDGs 1, 2, 5, and 11), strengthening the capacities of rural actors, particularly family farmers, rural women and youth, countries can unlock the potential of those actors and allow them to fully contribute to the well-being and resilience of their communities, as well as to participate in the national development and economic growth. By facilitating family farmers' organization and coordination, countries can deliver better, inclusive and tailored services to family farmers and rural communities, which contribute to the achievement of SDGs 4, 6, 7 and 10. Strengthened organizations of family farmers are better able to raise awareness and to affect policy-making processes to ensure more responsive, inclusive, participatory and representative decision-making processes at all levels, as well as a better access to information and knowledge (SDG 16) and inclusive multi-stakeholder partnerships to improve capacity-building (SDG 17) with a particular gendered aspect regarding women's organization (SDG 5).

2. Family Farmers' Organizations in South Asia

There is scant online literature on the number, profile and characteristics of farmers' organizations in South Asia, and even the whole world. While literature abounds about family farmers, it is very difficult to find articles

that provides a comprehensive overview and analysis of organizations of peasant/farmer/family farmers for South Asia.

2.1 Typologies of Family Farmers Organizations

Family Farming Organizations can be classified according to the following:

Geographic levels- community/village, town/municipal/district, province, national, regional/continental and international levels. Some lower-level organizations can be members of the higher level organizations; in that case the FFO becomes a federation or a network of organizations. Cooperatives distinguish three levels: primary, secondary and tertiary, where secondary cooperatives are federations of primary cooperatives and tertiary cooperatives are federations of secondary cooperatives.

Who initiated or catalyzed the formation of these groups- self-help groups, organized by government mainly for more efficient delivery of projects or programs, political parties, or NGOs.

Purpose of the organizations- Farmers' organizations in general are aimed to promote and protect their interests and livelihoods as farmers. There are FOs who are issue based or are focused on a single or several issues and interests, and their work and service to their members revolve around influencing the government to enact or amend policies and programs to benefit farmers. Then, there are groups that were organized mainly to be the efficient channels of delivery of programs and projects, these are mainly true for government-initiated farmers groups. There are also groups of commodity-based, market-orientated FOs who specialize in single commodity and opt for value added products which have expanded markets. They are designated as output-dominated organizations. Not specific to any single community, they can obtain members from among the growers of that commodity who are interested in investing some share capital to acquire the most recent processing technology and professional manpower. These FOs are generally not small and have to operate in a competitive environment. Research, input supply, extension, credit, collection of produce, processing, and marketing are all integrated to maximize the returns on the investments of the members who invested in the collective enterprise. Several successful cases are found in India, such as Anand Milk and other dairy FOs (Swanson & Sofranco, 1996).

2.2 Family Farmers in South Asia

In this section, three cases in point are discussed. First, The MTCP2 program¹ is being managed by a regional FO Asian Farmers Association for Sustainable Rural Development², in consortium with an international peasant movement La Via Campesina³. In five countries in South Asia, MTCP2 is working with 37 national FFOs, and 135 sub national FOs, with 10,209,764 farming households as members (Table 1)⁴.

Table 1. Outreach of MTCP2 Program, South Asia.

Country	Partner National FO	Partner Sub-National FO	HH Members
Bangladesh	14	30	3,035,277
India	1	16	2,643,337
Nepal	19	54	4,500,000
Pakistan	2	26	6,500
Sri Lanka	1	9	24,650
Total	37	135	10,209,764

Second, a mapping and capacity assessment exercise done by the Food and Agriculture Organization office in Bangladesh, as part of the technical assistance component to the government's Integrated Agricultural Productivity Project (IAPP) supported by the Global Agricultural Food Security Program (GAFFP) reported that the research team found a total of 198,114 farmers' organizations, with most of them organized at community level having only around 25-30 members per group, and with majority of them formed with support from extension agencies of the Government or of national and international NGOs (FAO, 2014). As the report stated, "the organizations have been created, in most cases, as a channel for the delivery of project activities, services and goods, rather than as sustainable rural institutions. These project-based FOs tend to lack plans for sustainability after the withdrawal of project assistance. As such, their sustainability is questionable. However, around 2% of these

¹ The Medium Term Cooperation Program Phase 2 (MTCP2) in South Asia is supported by the International Fund for Agricultural Development (IFAD) and Swiss Agency for Development and Cooperation (SDC), implemented by the consortium Asian Farmers Association for Sustainable Rural Development (AFA) and La Via Campesina with AFA as grant recipient.

² An alliance of 22 member FOs in 16 countries in Asia.

³ International peasant movement with 180+ organizations in 80 countries as members

⁴ For more information on the partner FOs in MTCP2, please visit the FO directory South Asia section in this website: <https://asiapacificfarmersforum.net>

small groups have been federated at some level. There were few organizations found that are truly autonomous.

Third, as mentioned above, a common form of aggrupation of family farmers is through cooperatives, whether at primary, secondary or tertiary level. The International Cooperative Alliance stated that there is no global-level comprehensive database of cooperative statistics because statistical offices analyze cooperatives differently from country to country. Therefore, it is difficult to get a complete picture. However, in a paper on Global Census on Cooperatives, it stated that globally, there are 2.6M cooperatives with over 1B memberships and clients. The report says it is more accurate to refer to memberships than individuals (Dave & Associates, 2014), as one individual can be a member of more than one cooperative. It is interesting to note though that the report stated that the most common type of cooperative is an agricultural cooperative, but this is influenced by large number of cooperatives in India and China. In both these countries, "the small size of landholdings (0.3-0.4 in China and 1.3 in India) makes it important for farmers to work together to gain economies of scale and scope. As such, both of these markets have large numbers of agricultural cooperatives and control significant market share in certain sectors. For example, Indian cooperatives have 36% market share of the fertilizer market. Chinese cooperatives have 60% market share in cotton, 68% in agri-processing, 70-80% market share in tea production and >80% market share in fertilizer. The same report stated that in Asia there are 1,933, 299 cooperatives with 484,105,695 members, comprising 12% of the total population in Asia, but there is no data as to how many cooperatives and how many individual members are in South Asia.

3. Challenges Faced by Family Farmers Organizations in South Asia

Family farmers' organizations and cooperatives experience a lot of challenges and limitations. During an Regional Expert Consultation Meeting on Family Farmers ' Cooperatives , held July 2019 and co-organized by SAC, AFA, and ICA-AP , participant acknowledged that Family farmers (FF) cooperatives in South Asia face challenges related to lack of autonomy and independence of farmers cooperatives; inadequate capacity of cooperatives management and leaders to effectively run the cooperatives with transparency and accountability, and the complexity of cooperative rules and regulations and its implementation. Various consultations among AFA

members and partner FFOs in South Asia, likewise, identified Common challenges of FFOs:

i) Fragmentation, Leading to Unconsolidated Voice and Strength– There are many FFOs, but many of them are small village level groups, and are not part of larger formations, federations, networks or alliances. As small groups, they are usually unable to strengthen solidarity and represent the voice of the farmers in the country, unable to influence policy making and program design and implementation, unable to pool needed resources to cut down any transaction cost in their businesses/services, unable to share experience and lessons learned in undertaking various activities or promoting various issues.

ii) Sustainability Issues- Many farmers organizations have short life spans, and some contributory factors to these are the following: First, many farmers have been organized as local groups, mainly through official government projects, and served merely as service delivery mechanism of the government projects. Many of these FOs become inactive once the project is completed, because the groups do not have any plans beyond the duration of the project.

Second, many FFOs have little resources, greatly limiting the services they can give to their members, and eventually these members lose interest in their organizations, especially when the project that supported their formation is finished. Many FFOs do not have the resources to hire professional staff who can do the nitty gritty work of running an organization, including membership and leadership development, and institutionalizing systems for project development and implementation, organizational management including financial management. As a result, the FFOs are unable to build a track record and credibility to other partners, including the government.

iii) Lack of Autonomy and Independence- Some FFOs and cooperatives are not headed by farmers, but by politicians who represent political parties with defined political, and electoral interests. Still some FFOs remain dependent on the human and finance resources of their partner NGOs. In both cases, FFOs may become beholden to the politician/political party or NGO, weakening their capacities for organizational maturity, to shape their own priorities and respond to their own interests.

- iv) **Weak Organizational Capacities and Leadership-** Many family farmers organizations have weak capacities to provide wholistic, multi-faceted services to their members, especially in providing economic services.
- v) **Absence of Policy to Register FOs** - Many countries do not have policies to legally recognize and register family farming organizations at local and more especially at national levels. Thus, many family farming organizations do not have juridical personality and cannot transact business, enter into partnerships with other stakeholders, and cannot receive funds from international donors and partners. In some countries, farmers organizations can register as non-stock, non-profit organizations, but the requirements for registration and for maintaining registration are tedious (e.g. approval of every activity to an NGO Board, high fees for registering a cooperative and complex cooperative rules and regulations).
- vi) **Weak Recognition from Governments and Representation in Policy Making-** In some countries, there is observed aversion from governments to family farmers organizations as they are deemed political, or are highly critical of government policies. This is because many farmers organizations were catalyzed by social and political activists who were fighting for just causes (like land rights), and have used direct actions (like rallies, strikes) which are viewed negatively by government officials. Another contributing factor to weak recognition is poor track record of many FFOs to act as service providers for the many government projects on agriculture, food security and nutrition, owing also to weak organizational, leadership and financial capacities. Many FFOs also have inadequate skills for lobbying and advocacy (e.g. making policy proposals) as well as social capital within the government sector, to be able to push successfully the enactment of much needed and strategic policies and reforms. This weak recognition results to weak representation in government policy making bodies, and therefore their voices are not heard during policy deliberations. As a result, too many agricultural policies are not favorable or do not cater to the real needs of the family farmers or do not reach as many farmers as potentially possible.

4. Review of Policies and Programs on Strengthening and Partnering with Family Farmers Organizations

4.1 Partnerships with Family Farmers Organizations

There is few literatures on the policies and programs on strengthening and partnering with FFOs. As cases in point, the following programs are cited based on AFA's knowledge about its FFO partners:

The MTCP2 program, mentioned earlier in Section 2 and Figure 1 above, is a capacity building program for FFOs which is managed and implemented by the FFOs themselves⁵, with funding support from IFAD and SDC. Funds are directly channelled to the regional FO and then to a national FFO selected by the national platform of FFOs. Through MTCP2 support, the membership of the partner FFOs increased 40% in the span of five years, their organizational capacities strengthened and FFOs were able to engage and partner with government and private companies.

In Bangladesh, the government's Integrated Agricultural Productivity Project (IAPP), with support from the Global Agriculture and Food Security Program (GAFSP), and with FAO providing Technical Assistance, identified advanced farmers groups from among the hundreds of participating farmers' groups assisted by the project. These groups were later federated into a national society of farmers' groups, and became an implementing partner of a project supported by the Global Agriculture and Food Security Program (GAFSP) through its Missing Middle Initiative (MMI).

In Pakistan, the project "Economic Transformation Initiative-Gilgit Baltistan", with financing from IFAD, is using the Village Producer Group (VPG) -based value chain development. The Project plans to establish 220 VPGs as a starting point for all value chain activities, and that these VPGs should ultimately be formalized into cooperatives.

4.2 Opportunities for FFOs to Strengthen Themselves

Several existing government programs can facilitate the building and strengthening of FFOs, such as:

In Bhutan, the government is implementing the Food Security and Agriculture Productivity Project (FSAPP), with funding from the Global Agriculture and Food Security Program (GAFSP). One of the four project components is "strengthening farmer and producer groups". Currently, its

⁵ For a list of FFOs implementing MTCP2 in South Asia, please go to this link : <https://asiapacificfarmersforum.net/south-asia/>

Department of Agricultural Marketing Cooperatives has 72 registered farmers' cooperatives, majority at nascent stage, and are not connected to a relevant higher-level organization. The FSAPP can facilitate interaction among these registered cooperatives to pave the way for the building of a national federation of cooperative in the country that can provide organizational capacity-building, economic services to members and represent farmers at local and national level policy making processes.

In Maldives, the government formed Agro National Corporation as a state - owned enterprise with the over-all mandate to assist in developing the agriculture sector. The Corporation will work towards enforcing objectives such as enabling an efficient supply chain for agriculture, providing technical expertise and training to farmers, expanding the role of women in farming, and facilitating access to quality fertilizers across islands.

In Sri Lanka, the participating FFOs in the MTCP2 project is working with the IFAD supported projects in the country to promote farmers' cooperatives, starting with their partner farmers groups.

5. Regional Action Plan under the Pillar 4 of UNDF

The Global Action Plan identifies four outcomes for Pillar 4, and in each outcome, a set of outputs, indicative actions from global to local, indicators and targets. These are basically guides for the development of regional and national action plans, as well as for monitoring the effectiveness of the implementation of the Decade, to be able to promote coherence and coordination among member states and regions who are committed to implement the Plan. The four identified expected outcomes of Pillar 4 include: i) Strengthened governance and organizational capacities of family farmers' organizations engaged in agriculture, forestry and fisheries to better serve their members and their communities; ii) Family farmers' and their organizations' technical expertise and capability to access and provide services to their members strengthened for sustainable livelihoods and landscapes; iii) Collective actions, by strong, transparent and inclusive organizations looking for solutions conducted, and iv) Communication, ICTs capacities/services improved, and family famers' voices heard .

Table 2. Plan of Action for Pillar 4 of the UNDF in South Asia

Expected Outcomes	Priority Policies	Priority Actions	Time Frame	Indicators	Responsible Institutions
<p>4.1 Strong governance and organizational capacities of Family Farmers Organizations to better serve their members and communities.</p>	<p><u>National Level</u> Review existing policies and amend/enact to recognize FOs, and cooperatives of FOs, including:</p> <ul style="list-style-type: none"> ▪ FF- friendly, easy and affordable registration procedures. ▪ Capacity building programs at all tiers (local, national, regional) that will enhance the managerial, governance, financial viability, marketing knowledge and skills of both farmer leaders and professional managers. ▪ Training, mentoring, supervision on promoting good and accountable leadership as well as sound and transparent management and financial 	<p><u>National -level Actions</u></p> <p>Cluster formation of family farmers (India)</p>	<p>Ongoing</p>	<p>Number of sustainable family farming clusters Number of countries with strengthened organizations of family farmers Number of regional and national FFOs with women and youth in leadership roles.</p>	<p>Country UNDF focal persons and relevant agencies, with national FFOs, and national offices of FAO, IFAD, SAC, ICA</p>
		<p>Strengthen community based producer organizations, and Cooperatives (Maldives); promote cooperative farms (Sri Lanka) and support FFOs in registration, cooperation with government and non-government organizations</p>	<p>From 2021 onwards</p>	<ul style="list-style-type: none"> ▪ Increase in the number of FFOs, community based seed groups and seed banks and are functional. 	

Expected Outcomes	Priority Policies	Priority Actions	Time Frame	Indicators	Responsible Institutions
	systems; conduct training on organizational and project management, financial management.	(Nepal). Strengthen community based seed groups and seed banks		<ul style="list-style-type: none"> ▪ Multi stakeholder CBSS network at regional and national levels. 	
		Improve the access to modern technologies with guidance materials through Farmer Field Schools.	2021 onward		
		<p><u>Regional Level</u></p> <p>Knowledge Exchange and Best Practice on Strengthening FOs, including a South-South exchange on policies in recognizing FFOs and cooperatives.</p> <p>Awards for Outstanding FOs and cooperatives, including development of characteristics of outstanding FFOs and cooperatives.</p> <p>FFO representation in the SAARC Seed Board.</p> <p>Development of training modules on organization</p>	2021 and every two years thereafter	Number of countries with strong FOs at country levels	<p>AFA, FAO, IFAD, SAC, ICA</p> <p>SAC,</p> <p>AFA, FAO, SAC, ICA</p>

Expected Outcomes	Priority Policies	Priority Actions	Time Frame	Indicators	Responsible Institutions
	<p><u>Regional Level</u></p> <ul style="list-style-type: none"> <li>▪ Build and strengthen the capacities of concerned government agencies and leaders of family farmers organizations in establishing and strengthening family farmers’ cooperatives and their enterprises <li>▪ Declaring a day as a SAARC family farmers’ cooperative day; facilitation of visas for representatives of agri cooperatives attending SAARC events; formulation of a roadmap to promote agricultural cooperatives; harmonization of principles, guidelines, framework on agricultural 	<p>development, cooperative management, on community seed banks.</p> <p><u>National Level</u></p> <p>Development of demand-driven value chains, shortening of supply chains, and building direct producer groups-consumer groups linkages</p> <p><u>Regional Level</u></p> <p>Creation of multi stakeholder WG on Agricultural Cooperatives within SAC.</p> <ul style="list-style-type: none"> <li>▪ Yearly national and regional Agri Cooperative Business Forum for sharing experiences and policy dialogues. <li>▪ Learning exchanges, study visits, training programs, dissemination of successful cooperatives through print, video and mass/social media, exchanges with 	<p>2021 onwards; for programming</p>	<p>Number of commodity fora established SAARC cooperative business forum held regularly</p>	<p>Country UNDF focal persons and relevant agencies, with national FFOs, and national offices of FAO, IFAD, SAC, ICA At regional level, SAC, with AFA, FAO, ICA-AP, IFAD</p>

Expected Outcomes	Priority Policies	Priority Actions	Time Frame	Indicators	Responsible Institutions
	<p>cooperatives, and recognize the role of family farmers' cooperatives in the proposed SAARC Plan of Action for Cooperation on the Matters Relating to Cooperatives and involve them in its implementation.</p>	<p>other Asian sub regions such as with ASEAN.</p> <ul style="list-style-type: none"> ▪ Establishment of a sub-regional data portal on cooperatives. ▪ Promote Coop-to-coop partnerships and businesses at country and regional levels, establishing a multi-stakeholder Regional Network of Agriculture Cooperatives for sharing and exchange and link to international markets. 			
<p>4.2 FFOs can access and provide farm and non-farm services to their members</p>	<p><u>National Level</u></p> <ul style="list-style-type: none"> ▪ Tax exemptions; flexible and easy credit; public procurement of crop and food produced by cooperatives, crop insurance to cooperatives, soft-loan, provision of land and other support services such as infrastructure 	<p><u>National Level Actions</u></p> <ul style="list-style-type: none"> ▪ Pilot districts for Agromet implementation (Bhutan). ▪ Pension schemes, insurance schemes, crop management, low interest agri credit with priority to members of FFOs (Sri Lanka). ▪ Agronat (Maldives). 	<p>2020-2023 Ongoing discussions</p>	<p>-Support for advisory services acquired by Farmers Groups Number of farmer led schools developed and strengthened at</p>	<p>Country UNDF focal persons and relevant agencies, with national FFOs, and national offices of FAO , IFAD, SAC, ICA</p>

Expected Outcomes	Priority Policies	Priority Actions	Time Frame	Indicators	Responsible Institutions
	(equipment, facilities, tools) for the use of agricultural cooperatives; and raising public awareness on the role of cooperatives in achieving the SDGs.	<ul style="list-style-type: none"> Capacity sharing on how to cope with climate change, how to partner with local and national governments on projects and programs dealing with climate change issues, cooperatives. 		country level. Promoting sustainable practices in the country.	
4.3 FFOs conduct collective action	UNDROP promoted	Regional Level Seminars on Global Policy Instruments Conducted (UNDROP, UNFCCC, ITPGFRA)	2021 onwards	Number of FFOs doing collective action to promote these global policies	AFA with LVC
	VGGT RAI promoted	Seminars, Mapping of land investments viz VGGT, RAI compliance	2021-2022	Number of policies developed that are aligned with these global policy instruments	AFA
	Sustainable Food Systems Promoted	Consultation on Sustainable Food Systems	2021	At least one sharing session every two years	AFA, SAC, FAO
		Capacity Sharing on Climate Change Adaptation and Mitigation	2021 onwards		

Expected Outcomes	Priority Policies	Priority Actions	Time Frame	Indicators	Responsible Institutions
<p>4.4 Voices of FF are heard and ICT capacities improved</p>	<p><u>National Level</u> Governments should establish multi stakeholder NCFFs with FFOs at center and driving force.</p> <p><u>Regional Level</u> Multi stakeholder Technical Committee on UNDFE, Agri Cooperatives and Community Based Seed Systems and representatives of farmers in SAARC Seed Board, selected by the FFOs themselves.</p>	<p><u>National Level</u> Development of multi stakeholder National Action Plans for UNDFE with involvement of FFOs from design, implementation and monitoring.</p>	<p>2021</p>	<p>Number of national action plans developed, with multi stakeholder approach, and with meaningful involvement of FFOs from design, implementation, monitoring</p>	<p>AFA, SAC, FAO</p>
	<p>Enact/Review/Revise Communications Policies to support community radio, broadcast and podcast.</p>	<p>Training on Participatory Communications Planning and subsequent capacity building to effectively implement the participatory communications plan.</p> <p>Development of multi stakeholder platform on Communications Development.</p>	<p>2021-2022</p>	<p>Number of countries and number of FFOs and number of NCFFs with communications strategies, services, platforms</p>	<p>FAO/ComDev Asia</p>

6. Recommendations

How do we strengthen Family Farmers' Organizations in South Asia? Based on Table 2, the following key Actions can be undertaken at both national and regional levels.

6.1 At the National Level

6.1.1 Member states can

- Establish multi-stakeholder National Committees on Family Farming (NCFF) through inclusive participatory processes, with FFOs as key partners, and at the center and driving force of the process.
- Enact/Review/Revise policies on i) Registration and accreditation of FFOs and cooperatives; ii) Communications Policies; iii) SAARC Plan of Action for Cooperation on the Matters Relating to Cooperatives with the aim of making processes, requirements, support services (such as capacity building) and regulations (including supervision) friendly, appropriate and accessible to small scale family farmers.
- Incentivize FFOs and cooperatives through public procurement of their products, prioritizing them in programs such as in capacity building for production, value addition, marketing and distribution, in financing agriculture enterprises and businesses, in provision of social protection measures such as pensions and loans, as well as in giving awards to outstanding FFOs/cooperatives.
- Increase their recognition of independent and autonomous national-level FFOs by establishing inclusive processes for policy consultative and decision-making processes.

6.1.2 National FFOs and cooperatives can

- Continue to organize the family farmers in the country, building national tiers of associations and cooperatives, working with government project implementors and donors in federating the many small farmers groups in the country.
- As organizing is always to be complemented with education and formation /social conscientization work, continue to build the values, the principles, the knowledge and the skills of family farmers on the many aspects about their rights as farmers, as individuals and as citizens, organizational leadership, management, and society building.

- Mobilize both technical and financial resources from partner NGOs, donors and government to be able to render quality services to the members, to communicate effectively the perspectives of family farmers and be heard and listened to in consultative and decision-making processes.

6.1.3 Donors and development partners can

- Provide incentives to FFOs by entering into partnerships with them as service providers in the various projects they are financing in the country, sometimes, playing facilitation roles with government for FFOs to be better recognized and supported.
- Continue to support the capacity building efforts of FFOs, especially in building knowledge and skills on sustainable food systems.
- Include in project guidelines a criteria that projects should show the meaningful involvement of FFOs in project design, implementation, monitoring and project governance.

6.1.4 Support groups from the rest of the civil society can

- Provide technical and financial support to FFOs in undertakings of mutual interest, allowing FFOs to be at the center and the driving force for these activities.
- Enter into partnerships with FFOs, as consortium member, for proposal development, project cycle management.

6.1.5 At the regional level, SAARC through SAC can

- Implement effectively the provision of farmer representation in the SAARC Seed Board.
- Approve and implement the SAARC Plan of Action for Cooperation on the Matters Relating to Cooperatives, and facilitating the meaningful involvement of cooperatives of family farmers.
- Conduct multi stakeholder policy forum, knowledge sharing on various related topics on Pillar 4 to aid policy legislation and project development.
- Establish Working groups on agricultural cooperatives, community based seed systems, among others.

7. Conclusions

Family Farmers' organizations (FFOs) play a significant role in ensuring vibrant, inclusive, progressive rural societies through a gamut of multi-

faceted services: organizing, federating, building solidarity with the millions of small scale farmers, education and social awareness/conscientization, accompanying members in promoting their rights as farmers, individuals and citizens, providing services to improve production, value addition, marketing and distribution as well as to access the programs and services of government and other development partners. However, many FFOs in South Asia, currently face challenges as they are fragmented, with weak capacities and weak recognition from government and other partners, and with inadequate policies to support the fulfillment of their roles.

Pillar 4 in the Global Action Plan of the UNDFP, as well as the first draft of the regional action plan in this paper, provides a guideline for FFOs, member states, development partners and civil society on how we can strengthen the capacities of FFOs so that it can represent farmers' concerns, provide effective and inclusive services, and generate knowledge from their work. This guideline can be a reference for a roadmap that each country and the region can take. Strategic interventions under this pillar include enactment, review and revision on pertinent policies on accreditation, registration and support on FFOs and cooperatives; prioritizing FFOs and partnerships with them in the delivery of programs and services, and holistic formation and capacity building that will help farmers be innovative and responsible citizens and the FFOs a real Agency for change and development. Transformation in agriculture will really rely on the Agency of FFOs that are self-reliant, autonomous, able to take decisions, able to act, in partnership with other stakeholders, for the achievement of sustainable development, at the levels of the community, the nation, and the world.

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Chapter 12

Pillar 5

Improve Socio-Economic Inclusion, Resilience and Wellbeing of Family Farmers, Rural Households and Communities in South Asia

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Abstract

Smallholder family farming is the dominant form of agriculture and the economy of rural areas in South Asia. The objectives of this paper is to assess constraints and opportunities in South Asia with reference to relevant policies and making action plans and recommendation to strengthening family farming focusing on pillar 5 of the UNDAF. The paper is developed from the literature review and authors experiences in this field including the feedbacks and inputs obtained from the regional Webinar in South Asia held on November 5-6, 2020. Smallholder family farmers are the most impacted by poverty, vulnerability and policy exclusion and face the highest levels of economic, financial, social, and environmental stress during crisis. Despite these stresses and constraints, South Asia has rich endowment of natural resources, fertile land, abundant water resources, forest, minerals, and biodiversity as well as cheaper human resources with large proportion of youth forces that can be fully utilized to improve economic opportunities. Hence, smallholder farmers need to have adequate access to basic services, infrastructure, social protection systems, diversified production practices and markets to improve socio-economic inclusion, resilience, and wellbeing. Emphasis on enhancing productivity and profitability of family farms with gender inclusion, geography, and employment generation is needed. National strategies targeting poverty and hunger eradication should therefore adopt a family farming-centered approach conducive to integrated and inclusive approaches at country and local levels.

Keywords: Family farmers, inclusion, resilience, smallholder, well-being

1. Background

Smallholder family farming is the dominant form of agriculture and the economy of rural areas in South Asia, where smallholder family farmers account for 80% of the farm households. These smallholder family farmers have mainly adopting integrated farming system consisting of agriculture, livestock, forestry, fisheries (FAO & IFAD, 2019). Two-thirds of agricultural land cultivated by family farmers are rainfed and risk prone suffering from mercy of the monsoons. The average size of farm is too small in South Asian countries; for instance, Bangladesh 0.5 ha, India 1.4 ha, Nepal and Sri Lanka 0.7 ha, and Pakistan 3.0 ha (Thapa, 2010). Two-thirds of the smallholder family farmers lack access to institutional sources of credits, agricultural insurance and assured market services. About 70-85% of the farm households meet their seed requirement from their informal seed system as institutionalized formal seed system covers only 15-30% of the seed requirements (Gauchan & Joshi, 2019). Family farmers produce at least 70% of the foods in the region with 80% of women engaged in farm work.

The poverty rate and proportion of people in South Asia is very high with high food and nutrition insecurity and highly vulnerable to climate change and other shocks. About 70% of the people in South Asia live in rural areas accounting for 90% of the poor (World Bank, 2018). It is one of the most densely populated areas, accounting for one fifth of the world's population (1.7 billion), with high proportion of Young people accounting for 30% of the world's Youth (ILO, 2015). An estimated 29% of the people (216 million) in the region are living in extreme poverty out of 736 million extreme poor worldwide (World Bank, 2015). Agriculture employs about 60% of the poor and rural workforce in the region, of which 35% are women, and over 80% of the world's small and marginal farmers belong to this region (IFC, 2014). The proportion of youth population in South Asia is very high where, it has highest youth engagement in Agriculture (47%) as compared to East and south-East Asia (ILO, 2015).

The region is characterized by high levels of economic inequality which exacerbates a range of social, political and environmental challenges. South Asia's performance in the three indices, Gini Coefficient, Palma Ratio and Income Quintile Share Ratio indicates ever-worsening inequality (World Bank, 2015).

2. UNDFP Pillar 5

The United Nations has declared 2019-2028 as the UN Decade of Family Farming (UNDFP) in 2014. Since then, family farming has been gaining global attention, The Decade of Family Farming provides an extraordinary opportunity for the United Nations to achieve its Sustainable Development Goals (SDGs) in an inclusive, collaborative and coherent way (FAO & IFAD, 2019). By dedicating an International Year to family farming, the United Nations repositioned family farming at the center of agricultural, environmental and social policies in national agendas and achieved a shift towards a more equal and balanced development. The Decade's theme, "Feeding the World, Caring for the Earth," captures the ideas that family farmers are about more than production, they are also about stewardship — stewardship of the soil, seeds, biodiversity and human-animal interactions that make up a family farm (Workshop Joint Communique, 2020).

The UNDFP has designed 7 pillars as the action plans for implementing family farming and attain sustainable development goals (SDGs). Among them, the pillar 5 aims to improve socio-economic inclusion, resilience and wellbeing of family farmers through improvement in living standard of smallholder family farmers. Within family farmers, small-scale food producers, especially women, youth, indigenous peoples, ethnic minorities and landless tenant farmers are among the most disadvantaged groups (FAO & IFAD, 2019). These family farmers and rural households are the custodian of biodiversity, protectors of the fragile ecosystems and providers of sustainable healthy nutritious food systems in South Asia (FAO, 2014). They often have limited access to and control over natural resources, productive assets, markets, and social protection systems. Hence, there is a need to outline and provide strategies, outcome, action plans and implementation strategy to improve the livelihood, resilience, and inclusion of these family farmers in South Asia.

The objectives of this paper are to provide contribution of pillar 5 in achieving sustainable goals (SDGs), constraints and challenges in implementing the pillar with reference to relevant policies and potential opportunities available for implementing pillar and suggest action plans and recommendation to strengthen family farming in South Asia. The paper is initially developed from the literature review and author's experiences of working in this field in South Asia for the last two decades. The paper was finalized after its improvement from the feedbacks and inputs obtained from the regional Webinar held on November 5-6, 2020.

3. Contribution of Pillar 5 in Sustainable Development Goals

The Pillar 5 is at the center of policies and interventions that meets multiple and interconnected targets of the sustainable Development Goals. Member states in South Asia have committed to the achievement of Sustainable Development Goals (SDGs), especially the goals of ending hunger and poverty in the region. Family farmers are at the center of policies and interventions (FAO & IFAD, 2019). The pillar plays important role to meet multiple, inclusive and interconnected targets of the SDGs agreed globally (United Nations, 2016). These mainly include: reduced hunger, improved nutrition and poverty reduction (SDGs 1 and 2), gender equality and reduced inequalities (SDGs 5 and 11), increased and more sustainable production and consumption (SDG 12), resilience of communities to climate and shocks (SDG 13), improved management of natural resources (SDGs 14-15) and increased investments in agriculture conducive to rapid and long-standing economic growth (SDG 8). For this reason, the SDGs recognize the fundamental role of small-scale food producers, particularly of women and youth, and call for their access to land and other productive resources to reduce poverty and to improve their productivity and income (FAO & IFAD, 2019).

National strategies targeting poverty and hunger eradication should therefore adopt a family farming-centered approach, conducive to integrated approaches at country and local levels. Policies and programs that emphasis on enhancing productivity and profitability of small holder family farms not only enhances resilience to economic crisis, disasters and pandemics (COVID-19) but also it is inclusive in terms of gender inclusion, geography, employment generation and pro-poor as rural areas and smallholder family farms are hotspots of poverty, food insecurity and malnutrition.

4. Constraints and Challenges on Strengthening Family Farming

Policies and programs implemented currently in the South Asia are very broad not much specifically targeted to most poor, vulnerable, and disadvantaged family farmers, women, youth, indigenous communities, and ethnic minorities. Considering the high agroecological diversity, heterogenous farming systems and diversity of socioeconomic settings, the current conventional centralized model has not been able to serve the needs and priorities of majority of smallholder family farmers. Specifically, current agricultural development model and programs have not addressed to small

and marginal farmers located in remote and rainfed risk-prone environments in South Asia.

Despite fairly good progress made by some countries in South Asia in increasing cereal crop production and improving food security, they have not been able to promote the growth of higher value food products and related services (Shrestha & Gauchan, 2020). The combination of import protection, restrictions on markets and prices, and extensive passive subsidies have hindered competitive agribusiness activities in South Asia (Chodavarapu et al., 2016).

Smallholder family farmers, particularly small-scale food producers, women and indigenous communities are the most impacted by poverty, vulnerability and policy exclusion and face the highest levels of economic, financial, social and environmental stress during crisis (Workshop Joint Communique, 2020).

South Asia region is very vulnerable to natural disasters (flood, drought, landslides) including climate change impact. There is a high risks to livelihood, disaster, climate and market vulnerabilities of the small family farmers. Presently smallholder family farmers have limited access to and control over lands and other natural resources as well as limited access to input and output markets for production and business activities for most poor and disadvantaged farmers. Social protection services (e.g. insurance, safety nets) are very much weak for poor, vulnerable, disadvantaged, women, ethnic and indigenous communities in South Asia (World Bank, 2015).

Support to technology development and innovation targeting marginal family farmers, tenants, women, indigenous and ethnic minorities, and vulnerable groups are very much limited. Programs and policies to support social capital building of family farmers in science, agribusiness innovation and entrepreneurship development are limited.

5. Opportunities for Implementing of Pillar 5

South Asia has rich endowment of natural resources; fertile land, abundant water resources, forest, minerals and biodiversity that can be fully utilized to improve economic opportunities. The region has a large proportion of cheaper labour resource with high proportion (47%) of youth, innovative farmers and about 70% women engaged in agriculture (ILO, 2015) with

potential for inclusive development and meeting a growing market demand for agribusiness products.

A good opportunity exists for economic prosperity of smallholder family farmers through interregional trade integration and facilitation with efficient and inclusive agricultural value chains, entrepreneurship development and employment generation.

There is a high potential for resilience building to reduce vulnerability to natural disasters, climate extremities and market volatility with the adoption of climate smart agriculture, disaster risks reduction and social capital building of farmers, empowerment of women, youth and local communities. The current two global processes mainly implementation of UNDFP and planned UN Food Systems Summit in 2021 and development of strategies for halting COVID 19 pandemic, all present tremendous opportunity for South Asia to build back better. These options provide harnessing the potentials of its 1 Billion farmers to contribute to the immense task of transforming agriculture into more sustainable, greener, and more resilient food systems that ensure improvement of their livelihoods, well-being, and prosperity towards the achievement of the SDGs.

6. Review of Policies and Strategies Related to Pillar 5

Most countries in South Asia have some policies related to agriculture development, economic prosperity, poverty reduction and food and nutrition security for improving standard of living of smallholder family farms. The member countries in South Asia have formulated and implemented agriculture, food security and natural resource related policies for ensuring sustainable food system and ending poverty and hunger. Bangladesh, Nepal, Pakistan and Sri Lanka have formulated national agriculture policies differently in different years and are being implemented to increase agriculture production, productivity and sustainable food and nutrition security through research and development (R&D); natural resource development; safe food production and efficient marketing. Bhutan has developed "Food and Nutrition Security Policy 2014 (RGoB, 2014) to ensure the fundamental rights of Bhutanese for affordable, adequate, safe, nutritious and culturally acceptable food.

Similarly, the government of India has formulated "National Agricultural Development Plan 2007; National Food Security Mission 2007; National Innovations on Climate Resilient Agriculture 2011; National Agro-forestry Policy 2014' that are being implemented in the country (Shrestha & Gauchan,

2020). Maldives developed Agricultural Development Master Plan 2009 (2010-2025) focused on entire value chain development from inputs to production and consumption of major high value crops.

Nepal has formulated Agriculture Development Strategy (ADS) 2015 which is under implementation. The ADS envisages to accelerate economic growth and contributes to improve livelihoods and food and nutrition security through a self-reliant, sustainable, competitive, and inclusive agriculture through four strategic components: commercialization, productivity, competitiveness, and governance (MoAD, 2015).

Pakistan has formulated the National Food Security and Agriculture Policy 2017, which emphasizes the inclusive growth through structural reforms, productivity enhancement, and youth engagement. The National Agricultural Policy 2007 of Sri Lanka focuses on sustainable production and productivity, food and nutritional security; vulnerability and resilience; market development; private sector involvement; extension and information systems.

7. Regional Action Plan under the Pillar 5 of UNDF for Strengthening Family Farming

The pillar 5 of the UN decade of the family farming (UNDF) aims to improve the living standard of the most poor, vulnerable, and excluded family farmers, rural households and communities through social inclusion, resilience building and well-being. The expected outcome, priority policies, actions with time frame, indicators and responsible institutions is given in Table 1. There are four expected outcomes for which priority policies and actions with their implementation time frame, indicators and responsible institutions are briefly outlined. Emphasis has been given on living standard and welfare of smallholder family farmers and their access to and control over financial and natural resources (land, water, forests). The resilience and economic viability of family farms are enhanced and farmers access to local and international markets and diversified income generating options are to be improved. Policies and priority actions are to be focused on resilience of smallholder farmers. Responsible institutions are mainly Ministry of Agriculture, Forestry, Environment & Commerce etc. and R&D organizations and private sectors. The time frame for the accomplishment is planned for 2020-2025.

Table 1. Pillar 5: Expected outcome, priority policies, timeframe, and indicators

Expected Outcomes	Priority Policies	Priority Actions	Indicators	Time frame	Responsible Institutions
5.1 Living standard and welfare of smallholder family farmers <u>enhanced</u> by reducing risks and vulnerability to natural disasters, climate change, pandemics, and market variability	<ul style="list-style-type: none"> ▪ Policy on future smart food value chains (NUS crops, trees, livestock, fishery & MAPs). ▪ Policy on credit supply for value chain & marketing of organic native products 	<ul style="list-style-type: none"> ▪ Participatory value chain development & promotion for future smart foods (FSF) ▪ Subsidized collateral free micro credits for women, youth & disadvantaged groups 	<ul style="list-style-type: none"> ▪ No of households reached with value chains of FSF ▪ No of households accessing subsidized collateral free microcredits 	2020-2025	Agri Ministry, R &D Institutions Private sectors, Financing institutions,
5.2 Farmers' access to and control over financial and natural resources (land, water, forests) and productive assets (land, livestock, equipment etc.) strengthened	<ul style="list-style-type: none"> ▪ Forestry, water & land policies, and laws to promote access & entitlement resources. ▪ Resource policy & laws to enhance access & ownership of productive assets 	<ul style="list-style-type: none"> ▪ Promote contract farming suited to marginal & land less farmers ▪ Community forestry, communal ponds, and community livestock & land management Programs 	<ul style="list-style-type: none"> ▪ Share of poor & women's access to land water & forest resources ▪ Number of poor's access to resources 	2020-2025	Ministry of Land, Agri & Environment; Community based Institutions
5.3 The resilience and economic viability of family farms <u>enhanced</u> through sustainable and diversified farming & food systems	<ul style="list-style-type: none"> ▪ Policy to support climate smart agriculture practices ▪ Policies to support on Minimum Support Price (MSP) & Public Procurement 	<ul style="list-style-type: none"> ▪ Promote climate smart agriculture/village programs ▪ Program for MSP and public procurement program for NUS. 	No of community coverage of climate smart agriculture -Qty of NUS products procured	2020-2025	Agri Ministry, Local government Cooperatives
5.4 Farmers access to local and international markets and diversified income generating options improved.	<ul style="list-style-type: none"> ▪ Policy on organic and ecological farming ▪ Geographical Indication (GI) policy for promoting native unique biodiverse products. 	Organic and GI programs for native and biodiverse products. Build capacity of farmers to enhance access to regional & global markets.	Technologies and standards for organic & GI products. Reformed trade & market policies & laws.	2020-2025	Ministry of Agri & Commerce & Industry. Private sectors.

8. Propose a Regional Action Plan under Pillar 5

Family farming in South Asia need to be strengthened to improve the socio-economic inclusion, resilience, and wellbeing. For this, there is a need to increase the family farmer's production of sufficient, safe, diverse, and nutritious food for their own provisions through diversification of their production. At the same time, it is essential to promote diversified models of production, practices, and technical solutions to reduce family farmers' dependence on external inputs and to improve their efficiency and economic viability while strengthening their economic, ecological, and social resilience. The expert group discussion during Webinar held on November 5-6, 2020 facilitated by the authors suggested five key actions for pillar 5 in the form of research, action, and policy. These are briefly outlined below.

8.1 Case Studies on Local Species of Fishes/Forests/Native Crops/Local Commodities/Local Technologies/Underutilized Crops

Local and native agricultural species such as native fishes, non-timber forest species, indigenous and underutilized crops and technologies are important for food and nutrition security and livelihoods of small-food producers, women, and indigenous communities. However, research on these crops and commodities are limited and package of practices are not available. Therefore, there is a need of research work to document good practices and traditional knowledges to refine them scientifically.

8.2 Case Studies on Local Species of Fishes/Forests/Native Crops/Local Commodities/Local Technologies/Underutilized Crops

Smallholder vulnerable family farmers lack social protection mechanisms particularly during bad weather, disaster, and pandemics such as COVID-19. Hence, creation of emergency funds are suggested to them as an agricultural insurance and relief funds for poorest and vulnerable groups cultivating native underutilized crops, raising livestock and fishery and those engaged in collecting and selling other farm commodities and non-timber forest products and farm products.

8.3 Social Safety Net and Rehabilitation for Disadvantaged Groups

Presently, smallholder disadvantaged indigenous farmers, women and land less agricultural labor lack targeted safety net programs to protect them from vulnerability of production and markets. Hence, seed and input support programs as well as targeted crops and livestock insurance programs are

suggested to target most vulnerable farmers, women, and indigenous and ethnic minorities. Community seed banks and community food banks are also suggested to ensure their seed and food security during natural and manmade crisis.

8.4 Urban Horticulture, Terrace Farming, Protected Agriculture/ Vertical Farming

With growing urbanization, urban agriculture has shown great potential to employ urban youth and landless farm households in urban agriculture with enhanced access to new technologies and quality seeds and inputs for urban farming using protected system and vertical farming utilizing terraces, roof tops and backyards. For this capacity building of farmers, agro-entrepreneurs and stakeholders with appropriate policy support and value chains for protected /urban agriculture is needed. This is also essential for maintaining better urban ecosystems and environment and supporting nutrition and healthy diets to poor and vulnerable urban smallholders farmers and vulnerable groups.

8.5 Prioritize Effective Operation of Supply Chains During Pandemic & Disasters

The poor smallholder farmers, women and indigenous and ethnic minorities are most vulnerable from COVID-19 pandemic and other disasters due to disturbance of supply chains caused by movement restrictions. Hence, Governments in South Asia need to prioritized programs and activities targeting to most vulnerable farmers, indigenous and ethnic minorities. Special public and policy support and facilitation are needed to improve supply chains to ensure food and nutrition security and income of vulnerable farmers and groups.

9. Recommendations

In order to improve socio-economic inclusion, resilience and wellbeing of family farmers, smallholder family farmers need to have adequate access to basic services, infrastructure, social protection systems, diversified production practices and markets. National strategies targeting poverty and hunger eradication should therefore adopt a family farming-centered approach, conducive to integrated approaches at country and local levels. This study makes following recommendations to improve socio-economic inclusion, resilience and well-being of family farmers in South Asia.

- Enhance family farmers living standard and welfare by reducing risks and vulnerability to natural disasters, climate extremities, pandemics, and market vulnerability.
- Ensure family farmers' access to and control over financial and natural resources (land, water, forests) and productive assets (land, livestock, equipment etc.) especially for youth, women, indigenous communities, and landless people.
- Improve access to markets and income-generating opportunities for smallholder family farmers, particularly youth and women, in order to guarantee increased participation and adequate remuneration.
- Increase resilience and economic viability by encouraging sustainable and diversified production practices, innovations, and diverse and nutritious diets.
- Ensure that smallholder family farmers – particularly rural youth, women, and their communities - have access to social protection, services, and public goods in order to reduce social, economic, and ecological vulnerability.

10. Conclusions

Family farming is currently at the center of a much broader agenda of achieving sustainable development goals related to ending hunger, poverty, food insecurity and malnutrition including social inclusion, conservation of biodiversity, adaptation to changing climate, resilience, and sustainable management of natural resources as per UNDDF Pillar 5.. However, family farmers are among those who are most impacted by poverty and vulnerability and face the highest levels of economic, financial, social, and environmental risks in South Asia. Poverty, hunger, and vulnerability are exacerbated by natural disasters, climate extremities and market vulnerability including recently by the COVID-19 pandemics. Despite these stresses and constraints, South Asia has rich endowment of natural resources; fertile land, abundant water resources, forest, minerals, and biodiversity as well as human resources with large proportion of youth forces that can be fully utilized to improve economic opportunities. There is a high potential for resilience building to reduce vulnerability to natural disasters, climate extremities and market volatility with the adoption of climate smart agriculture, disaster risks reduction and social capital building of farmers, youth and women empowerment, and local communities. Hence, in order to improve socio-economic inclusion, resilience and wellbeing of

smallholder family farmers, rural households and communities, appropriate action plans and recommendations have been suggested in this paper. Emphasis on enhancing productivity and profitability of family farms with gender inclusion, geography, and employment generation is needed. National strategies targeting poverty and hunger eradication in South Asia should, adopt a family farming-centered approach conducive to integrated and inclusive approaches at the country, regional and local levels.

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Chapter 13

Pillar 6

Promote Sustainability of Family Farming for Climate-Resilient Food Systems in South Asia

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Abstract

Family farmers are the principal contributors to food security and nutrition, management of natural resources, rural community cohesion and cultural heritage. Food systems that are built around family farmers can offer new economic opportunities, rural urban linkages, attractive employment and synergies through a short food supply chain, which can provide promising solutions to eliminating food loss and waste. However, they are most impacted by poverty and vulnerability, and also heterogeneously face the highest degrees of economic, financial, social and environmental risks. This underpin the necessity of consideration of particular geographic and socio-economic conditions to develop context-specific policy interventions focusing on relevant family farmer groups, locally available resources and capacities. Agricultural farms in the world, particularly in South Asia are family owned, smaller in size, poorly mechanized and with farmers having weak involvement in value chains. Lack of locally relevant and timely information, transparent prices and fair relations in contractual agreements for family farmers along the food chains appeared as the main obstacles towards inclusive market development. Empowering and supporting family farmers to achieve innovative, diversified and dynamic agricultural systems can augment the availability of nutritious, sustainably produced and culturally appropriate food, which can boost healthy diets while advancing the progress towards context-specific, diversified, resilient and sustainable food systems in South Asia.

Keywords: Family farming, climate-resilient, food security, market access, sustainability

1. Background

South Asia is one of the fastest growing regions in the world where agriculture plays fundamental role for economic and livelihood development. About 65% of its population live in rural areas (FAOSTAT, 2019). SAARC is a populous region: home to 24.75% of the global population and more than 40% of the world's poor. The region represents 28% of the world's agricultural population and 3.4% of the world's landmass (FAOSTAT, 2019).

In south Asia about 67% of its population are small scale family farmers¹, living on less than one hectare of land, with farms- fisheries- and forested landscapes and thus rely on agriculture, fisheries and forests for their livelihoods. SAARC region is also known for accommodating higher number of hunger and undernourished population though it has made good progress on attaining several targets of the Sustainable Development Goals (SDGs), more efforts should be given on meeting the targets of SDG I (No Poverty) and SDG II (Zero Hunger). By 2050, the region needs to double its food production in order to feed the escalating population of 2 to 2.68 billion in the backdrop of declining arable land and global climate change issues. Therefore, sustainable and resilient agricultural practices are the key to combat the impending challenges in the region.

About 75% of the world's poorest live in rural areas and depend on agriculture for their livelihoods (FAO & IFAD, 2019). Rural population are predominately smallholder family farmers mainly practicing integrated farming system consisting of agriculture, forestry, fisheries, pastoral and aquaculture production. They are relatively more efficient in production which is managed and operated by a family and principally reliant on family labour (both women and men). In the world, 500 million farms are considered as family farms out of 600 million farms (FAO & IFAD, 2019). The family farmers offer over 80% of the world's food and cultivate around 70 to 80% of the farmland worldwide. It is likewise revealed that more than 90% of farms are operated by an individual or a family who rely mostly on family labour (FAO & IFAD, 2019).

The contribution of smallholder family farm is not only on providing the majority of the world's food, but also they are the major investors in

¹ Family farming refers to all types of family-based production models in agriculture, fishery forestry, pastoral and aquaculture, and include peasants, indigenous peoples, traditional communities, fisher folks, mountain farmers, forest users and pastoralists (FAO, 2014).

agriculture and the mainstay of the rural economic structure, since agriculture practices on large farms are particularly resource-intensive and can hurt the environment. Small family farms have the capacity to feed the starving, protect the environment, and stimulate the economy. Considering their importance, the United Nations in December 2017, proclaimed the United Nations Decade of Family Farming (2019-2028). This offers an extraordinary opportunity for the international community to address family farming issue from a holistic perspective to achieve substantial transformations in current food systems that will contribute to achieving the 2030 Agenda for Sustainable Development (FAO & IFAD, 2019).

In spite of the fact that family farming is the root of food security and sustainable healthy food system, family farmers are most impacted by poverty and vulnerability, and also face the highest levels of economic, financial, social and environmental risks. Their access to natural resources, productive assets and markets are also limited. However, not all family farmers face the same problem. There is a widespread heterogeneity of family farms around the world, which underpin the necessity of consideration of particular geographic and socio-economic specificities to develop context-specific interventions focusing on relevant family farmer groups, locally available resources and capacities.

2. Constraints, Challenges and Opportunities

Climate change, food security and population growth are some of the major threats that need to be addressed by the world community. Projection indicates that world population will reach 9.7 billion by 2050 and to feed the growing population, production of food needs to be increased by 50% by 2030 and by 70–100% by 2050 while arable lands continue to shrink along with predicted negative impacts of climate change on crop yields (Jones et al., 2014; Godfray et al., 2010).

South Asia is the home to 24.75% of the global population. Food systems face the challenges of providing sufficient, affordable and nutritious food to a growing population in the backdrop of depletion of natural resources, the increase of greenhouse gas emissions, environmental degradation, climate change and its related shocks and stresses. Family farmers, including peasants, indigenous peoples, traditional communities, pastoralists, fishers, mountain farmers, and many other groups of food producers, hold unique potential to promote transformative changes in how food is grown,

produced, processed and distributed, which enhances territorial development (SAARC, 2019).

Food systems face increasingly pressing challenges such as hunger and diet-related diseases, the need to provide a growing global population with sufficient and healthy food. To feed the world and do it sustainably, an urgent and radical shift in our food systems is necessary. To be effective, transformative actions must address a complex set of interconnected objectives encompassing economic, social and environmental dimensions. Family farmers are at the heart of this issue. They provide the majority of the world's food, are the major investors in agriculture and the backbone of the rural economic structure (FAO & IFAD, 2019).

Viable food systems that are built around family farmers can offer new economic opportunities and attractive employment. They also promote rural services (which are complementary to agricultural activities), while at the same time increasing rural-urban linkages and synergies through a short food supply chain, which can provide promising solutions to eliminating food loss and waste. The multifunctionality of family farmers related to their roles within the community and as caretakers of the environment allows for efficient and sustainable use and management of natural resources, such as the conservation and sustainable use of biodiversity, the prevention of soil depletion, water pollution and environmental degradation. It also promotes social inclusion and equity, the preservation/transmission of knowledge and culture, and the provision of ecosystem services and landscape management. This complexity requires adequate interconnected policies and actions that concurrently address the environmental, social and economic challenges of our society (FAO & IFAD, 2019).

In view of these challenges, the UNDDFF (2019-2028) has been announced by the United Nations in order to achieve substantial transformations in current food systems that will contribute to achieving the 2030 Agenda for Sustainable Development. This pillar 6 "Promote sustainability of family farming for climate-resilient food systems" offers the opportunity to simultaneously address effects of climate change (SDG 13), foster sustainability of food systems (SDGs 2 and 12), improve the sustainability in management and use of terrestrial and aquatic ecosystems (SDGs 14 and 15), with impacts across the three dimensions of sustainability. Enabling conditions are key to allow family farmers effectively play their role as critical agents of change.

3. Review of Policies and Programs

3.1 Afghanistan

Afghanistan is a landlocked country located in South-Central Asia. Agriculture is the main source of livelihoods for more than 80% of the Afghanistan people and contributes about 25% of the national Gross Domestic Product (GDP). Most of the poor people live in rural areas and they mostly practice subsistence farming. About 47% of the country's total land is rangeland, and only 12% land is arable of which 5.6% irrigated and 5.8% rainfed (FAO, 2016). Poverty is the main challenge in Afghanistan. Approximately 33% of Afghans are food insecure, and suffering from chronic malnutrition with rates 41%, to which agriculture bears a strong connection.

The Government of Afghanistan has developed "National Comprehensive Agriculture Priority Program (2016-2021)" aiming for overall development including food and nutrition security, good governance and economic development. The strategic framework has been implemented in achieving the core national objectives of self-reliance, increase income and generate employment. It comprises the six key priority areas: i) climate-change sensitive natural resource management; ii) wheat and cereal production; iii) development of industrial and high value horticulture crops and vegetables; iv) livestock development; v) food and nutrition security, and vi) institutional reform (Shrestha et al., 2019).

3.2 Bangladesh

Bangladesh is most densely populated agrarian economy where most of the poor people live in rural areas and reliant on agriculture for their livelihood and food security. Bangladesh is home to 16.5 million farmer families. Agriculture in Bangladesh is, however, constrained by a number of challenges, including small farm size and fragmentation of land, declining soil fertility, arable land, and water table, low engagement of youth in agriculture, and climate changes effects (Alam et al., 2018).

The Government of Bangladesh (GoB) has adopted the updated National Agricultural Policy- 2018 with the aim of ensuring profitable agriculture, nutrition and sustainable food security. GoB also developed the National Fisheries Policy in 1998 aiming to alleviate poverty through enhancing the fisheries resources and production, creation of self-employment and improvement of socioeconomic conditions of the fishers, and eventually contribute to meet the demand for animal protein. National Livestock

Development Policy- 2007 was developed to accelerate economic growth and reduce rural poverty through livestock sector development. The policy is more focused on sustainable improvement in productivity of milk, meat and egg. Furthermore, the GOB adopted National Food Policy Plan of Action – 2008 with main objectives to foster agriculture and livestock production for increasing dietary diversity, increasing the micronutrient daily intake and improving food security in the country. The GOB introduced Agriculture Input Assistance Card Program in 2010 through which farmers have given a smart card that allowed them to open a bank account and receive cash to purchase inputs. National Livestock Extension Policy– 2013 was formulated emphasizing veterinary public health and food safety, provide effective extension services, and make linkages the research and extension services. In addition, Export Policy- 2015 (2015-18) was formulated prioritizing diversification of export agricultural products (for example, herbal and tea).

3.3 Bhutan

Bhutan is a small landlocked mountainous country located in the southern slopes of Eastern Himalayas situated between China and India. Bhutan is predominantly an agriculture-based society. Over 49.10% of the population directly depending on agriculture for their livelihood. Almost 70% of the rural population are engaged in subsistence farming, where they suffer from lack of improved seed varieties, traditional technology, lack of mechanization and weak value chain development. The average cultivated agriculture land holding size is 3 acres per household. Most Bhutanese live in highly scattered villages that made it difficult to work in the groups. Majority of the Bhutanese farmers continue to practice self-sustaining, integrated and subsistence agricultural production system with small land holdings where farmers grow a variety of crops under different farming practices and rear livestock to meet their household food security (Shrestha et al., 2019).

The Government of Bhutan formulated many sectorial policies such as National Forest Policy- 2012, National Irrigation Policy- 2012, Water Act of Bhutan- 2011, Water Policy- 2002, National Environment Protection Act-2007, Biodiversity Act of Bhutan2003, National Disaster Management Act-2013, Biosafety Act of Bhutan- 2015, Pesticides Act of Bhutan- 2000, Seeds Act of Bhutan- 2000, Plant Quarantine Act- 1993, Forest and Nature Conservation Act- 1995. The 12th Five Year Plan (FYP) 2018-2023 emphasized agricultural enterprise development and commercialization in agriculture to maximize contribution in the nation's economy. The Royal Government of Bhutan

(RGoB)'s policy is to harness opportunities in enhancing agriculture, livestock and forests-based enterprises as declared in the Economic Development Policy- 2016. Food and Nutrition Security Policy- 2014 was developed to ensure the fundamental rights of Bhutanese for affordable, adequate, safe, nutritious and culturally acceptable food. Agriculture Land Development Guideline- 2017 is in pace of implementation to prevent land degradation, appropriate use of land, increase crop productivity, rural urban migration, and improve ecosystem.

3.4 India

Indian, which is comprised of 28 states, is the largest among the SAARC countries. India occupies about 2.4% of the world's land area and share about 18% of the world's population. Agriculture is the largest source of employment with about 55% of workforce engaged in agriculture as a source of livelihood (Rama Rao et al., 2018). India is the home to at least 10% of world's family farms. About 85% of farms in India are less than 2 ha in size and depend on family sources for labour and management. The average farm size decreased from 2.23 ha in 1970/71 to 1.12 ha in 2010/11. Even in the larger farms, management is done by family entirely and sometimes a part of labour is also sourced from the family.

In order to alleviate poverty and ending hunger, the government of India initiated some major policy initiatives such as National Mission on Sustainable Agriculture (NMSA); Rainfed Area Development (RAD) Schemes; National Agroforestry Policy (NAP); Pradhan Mantri Krishi Sinchai Yojana (PMKSY); Agriculture Contingency Plan; and National Initiative for Climate Resilient Agriculture (NICRA). In India, the Multi-state Cooperatives Act, 2002 (DAC, 2002a) and the National Policy on Cooperatives (DAC, 2002b) are the major policy provisions to incentivize farmers through cooperatives, provide supports and encouragement for making cooperatives self-reliant, autonomous, and democratically managed institutions and accountable to their members. National Food Security Mission (NFSM) operates since 2007-08 to increase the production of wheat, rice and pulses as well as the promotion of commercial crops like cotton, jute and sugarcane (Shrestha et al., 2019).

3.5 Maldives

Maldives is a small island consists of 1,190 coral islands located in the vast Indian Ocean isolated from the Asian mainland. In Maldives, the agriculture share in the GDP is only 1.8%. About 7,536 registered farmers are active in

agricultural operations in 77 inhabited islands. Back yard gardening is the most common in Maldives. Entire families used to engage in farming and a variety of crops are cultivated in a small piece of land at the backyard. Majority of the people engaged in agricultural activities are old age pension holders. Very few people from working age group also practice farming to supplement their income. Tourism sector is the main source of income of Maldives. Before the introduction of tourism, fishing and farming were the only sources to generate food for the households living in islands.

The government of Maldives has developed Agricultural Development Master Plan 2010-2025, integrating the overall perspectives, particularly from inputs to production and value chain of major high value crops. The government implemented Strategic Action Plan (2008-2013) to support the farmers' cooperatives in terms of subsidies for agriculture production, financial and technical assistance, processing and marketing.

3.6 Nepal

Nepal is a landlocked country bordered with India and China. The majority of the people (65.2%) depends on agriculture for their livelihood where about 18.7% people are still under absolute poverty. Nepalese agriculture is mostly small- scale subsistence and integrated farming system consisting of crop and livestock. Over 55% of Nepalese farms are operating on a subsistence basis and smallholder farmers have difficulty to get good returns on their produce as only 12% of them are able to sell directly to markets. The average size of land holding is 0.68 ha and the average number of parcels of land is 3.2. Average agriculture land holding per individual is 0.2 ha. In Nepal, over 80% of arable land is cultivated by families and about 2.7 million smallholder farms produce 70% of the food in the country (Shrestha et al., 2019).

The Government of Nepal has developed agricultural policies and programs aligned with the Sustainable Development Goals. Government has undertaken Zero Hunger Challenge (ZHC) to end hunger, food insecurity and malnutrition by 2025 as a vision to create a hunger less society for all people living in the country. Recently Ministry of Agriculture and Livestock Development developed a long-term plan (for 2015- 2035) 'Agriculture Development Strategy – 2015'. ADS envisaged to accelerate economic growth and to contribute to improved livelihoods and food and nutrition security through a self-reliant, sustainable, competitive, and inclusive agriculture with four strategic components: commercialization, productivity, competitiveness and governance. It has four flagship programs: i) Food and

Nutrition Security Program (FANSEP); ii) Decentralized Science, Technology, and Education Program (DSTEP); iii) Value Chain Development Program (VADEP); and iv) Innovation and Agro Entrepreneurship Program (INAGEP). The “National Cooperative Policy-2017” (DoC, 2017) aims to promote agricultural cooperatives through saving and credit scheme, subsidies for agricultural production, technology dissemination, processing and marketing of agricultural commodities.

3.7 Pakistan

Pakistan is predominantly an agricultural country with 19.5% GDP contribution. Majority of the family farmers (70%) are living in rural domain, and cultivate small and fragmented parcels of land. Hitherto these farmers produce the major chunk of foods for the country, this makes the smallholder family farmers a central player in rural economy. Around 3.8 million farms in the country are family farms with land holdings less than two hectares. It is also reported that above 90% of farms are operated by an individual or a family who rely primarily on family labour.

Pakistan formulated various policies related to agricultural research and development. Pakistan Vision- 2025 envisaged stabilizing the macroeconomic measures with inclusive growth and zero hunger through adoption of innovative technologies and cost-effective approaches in agriculture. In order to reduce the effects of climate change extremes, the GOP developed a Framework for the Implementation of Climate Change Policy (2014-2030). Recently, different policies including National Food Security Policy (2018) is being implemented to encourage farmers in increasing foods and reducing hunger and poverty in the country.

3.8 Sri Lanka

Sri Lanka is an agricultural country where more than 80% of population resides in rural areas, and agriculture remains the backbone of the economy. Almost half of poor rural people are small-scale farmers. Agriculture employs 28% of the labour force and about 1.65 million are smallholder farmers with land holding size less than 2 ha but contribute 80% of the total annual food production. Some of the major issues in agriculture sector in the country are low productivity, less competitiveness, land fragmentation, postharvest losses of fruits and vegetables and conflict of ownership claims.

The Government of Sri Lanka developed many agricultural policies, including National Agricultural Policy- 2007, to build an agriculture sector

that is environmentally prudent, economically productive and nutritionally prolific. The national agricultural policy is in compliance with the Sustainable Development Goals (SDG) in Sri Lanka, in particular with Goal 1 (No poverty) and Goal 2 (Ending hunger) and contributed to numerous other goals including Goal 5 (Gender equality), Goal 8 (Decent work and economic growth), Goal 12 (Responsible production and consumption) Goal 13 (Climate change), and Goal 15 (Life on land). The new National Co-operative Policy-2019 focused on introducing & developing enterprises to increase employment opportunities, facilitating new technology & market opportunities to the farmers, and increase the youth farmers in agriculture and contribute to the economy.

3. Regional Action Plan for Pillar 6 of the UNDFP

In order to achieve the 2030 Agenda for Sustainable Development through supporting family farming, country specific integrated, multispectral policies, strategies and programs are required to ensure family farmers' access to productive assets and services including e-agriculture information, conservation and renewal of natural resources, innovative and integrated farming practices, technical and financial support to women and youth entrepreneur, inclusive, sustainable and efficient value chain development, building social capital, and capacity development to adapt to climate-related shocks.

Table 1. Regional action plan of the UNDFP under Pillar 6

Expected Outcomes	Priority Policies	Priority Actions	Indicators	Time Frame	Responsible Institutions
6.1 Sustainable and responsible management of natural resources with increased access to productive assets and services to the family farmers.	<ul style="list-style-type: none"> ▪ Programs incentivizing family farmers' access to sustainable and locally adaptable technologies. ▪ Access to financial services well-tailored to family farmers' needs. 	<ul style="list-style-type: none"> ▪ Development and implementation of public policies, legislative and organizational frameworks to improve family farmers' rights to use, manage and control natural resources (water including surface water, land, ocean, genetic resources, forest resources, aquatic systems, nutrients, energy). ▪ Promote locally adaptable and innovative technologies. 	<ul style="list-style-type: none"> ▪ Number of policies, legislative, strategies formulated for promoting sustainable resource management and adopt innovative climate resilient technologies. ▪ Number of innovative and improved technologies. 	2021-2023	<ul style="list-style-type: none"> ▪ Ministry of Agriculture ▪ FAO
		<ul style="list-style-type: none"> ▪ Promote the family farming-specific financial schemes which reduce their financial risks, allow for sharing risks and reducing transaction costs, innovative partnerships and cooperation between family farmers, their organizations, cooperatives and public and private financial institutions. 	<ul style="list-style-type: none"> ▪ Formulated financial scheme that reduce the cost of transaction. ▪ Development of community saving and credit scheme and increase the volume of loan to the family farmers. 	2021-2023	<ul style="list-style-type: none"> ▪ Ministry of Finance. ▪ Central Bank ▪ Ministry of Cooperatives.

Expected Outcomes	Priority Policies	Priority Actions	Indicators	Time Frame	Responsible Institutions
		<ul style="list-style-type: none"> ▪ Capacity development through farmers to farmers, community based solutions and cooperative system of saving and accumulating loans based on local relation. 			
<p>6.2 Sustainable agriculture to support current and future generations' needs and mitigate climate change.</p>	<ul style="list-style-type: none"> ▪ Develop public policies and programs for conservation and renewal of natural resources. ▪ Strengthen family farmers' capacities to innovate and increase productivity. 	<ul style="list-style-type: none"> ▪ Develop and implement national public policies, strategies and legislative frameworks for sustainable and efficient management of natural resources (conserving, protecting and enhancing natural resources base). ▪ Promote innovative and integrated farming practices to increase productivity in agriculture, livestock, fisheries and aquaculture, and forestry in a sustainable manner. ▪ Policies for optimizing the diversity of species and genetic resources including neglected and underutilized species, reducing the use of external inputs. ▪ Policies and programs for climate change mitigation through providing specific technical 	<ul style="list-style-type: none"> ▪ Number of policies and programs formulated per country to enhance capacities of family farmers, governmental and other relevant institutions. ▪ Number of strategies and activities implemented that manage risks, foster sustainable production and/or address climate change and environmental degradation. 	<p>2022-2025</p>	<ul style="list-style-type: none"> ▪ Ministry of Agriculture ▪ Ministry of Land ▪ Ministry of Environment, Forest and Climate change. ▪ Ministry of Livestock and Fisheries.

Expected Outcomes	Priority Policies	Priority Actions	Indicators	Time Frame	Responsible Institutions
		<p>extension and advisory services to family farmers.</p> <ul style="list-style-type: none"> ▪ Capacity development of farmers for sharing and adaptation of sustainable agriculture practices integrating innovative, context-specific ancestral, traditional and indigenous practices and knowledge. ▪ Training and capacity development for social workers, agricultural extension personnel, teachers and other front-line personnel on sustainable food production and distribution practices in agriculture, livestock, fisheries and aquaculture, and forestry and on community development. 			
<p>6.3 Inclusive market environment for family farmers.</p>	<ul style="list-style-type: none"> ▪ Public policies and investment supporting infrastructure for local markets in place. 	<ul style="list-style-type: none"> ▪ Development of policy frameworks and institutional arrangements and infrastructure supporting the development of domestic and local markets for family farmers to provide nutritious and diversified food for all. 	<ul style="list-style-type: none"> ▪ Number of policies and programs formulated per country to develop rural infrastructure for supporting family farmers. 	<p>2021-2024</p>	<ul style="list-style-type: none"> ▪ Ministry of Agriculture

Expected Outcomes	Priority Policies	Priority Actions	Indicators	Time Frame	Responsible Institutions
	<ul style="list-style-type: none"> ▪ Develop short, diversified and nutritious food supply chain. ▪ Increase family farmers' capacities (knowledge and practices) on value adding activities and marketing strategies. 	<ul style="list-style-type: none"> ▪ Provide enabling institutional framework to promote direct linkages of family farmers to consumers in rural and urban areas to maximize their potential for beneficial access to reliable and remunerative markets. ▪ Capacity development and collaboration between family farmers and their organizations on processing and other value-adding activities to increase their autonomy and opportunity to better markets access. ▪ Development of specific materials and actions addressing urban and rural consumers' awareness of local products and on the cultural dimension of food production. ▪ Technological support and assistance to agricultural entrepreneurs and encouraging them to invest in agro-processing and agribusiness. ▪ Supply of fertilizers, machineries and other agricultural inputs to the 	<ul style="list-style-type: none"> ▪ Number of trainings for farmers on value addition and marketing strategies conducted. ▪ Number of profitable value chains identified that improved the family farmers' access to markets. 		

Expected Outcomes	Priority Policies	Priority Actions	Indicators	Time Frame	Responsible Institutions
		<p>family famers at administered prices.</p> <ul style="list-style-type: none"> ▪ Promotion of innovative varieties and technologies (agriculture, livestock, fisheries) among the family farmers through training, publications and exhibitions/ fairs/rallies/seminars/workshops. 			
<p>6.4 Encouraging involvement of women, youth and their organization in inclusive, sustainable and efficient value chain development.</p>	<ul style="list-style-type: none"> ▪ Develop and implement public policies and regulatory framework improving market transparency for family farmers. ▪ Policy and institutional frameworks empowering family farmers in contractual arrangements in the value chain. 	<ul style="list-style-type: none"> ▪ Providing timely and locally relevant information, fair, remunerative and transparent prices for family farmers' work and investments. ▪ Development policy and institutional arrangements, including innovative partnerships, related to value chains' functioning that empower family farmers, particularly women, youth and their organizations. ▪ Development of policies, regulatory and legal framework for responsible contract farming and other inclusive business models. 	<ul style="list-style-type: none"> ▪ Number of policy and programs designed and implemented per country that are supportive of family farming; and inclusiveness and efficiency in value chain and in agricultural and food systems. 	<p>2022-2025</p>	<ul style="list-style-type: none"> ▪ Ministry of Agriculture ▪ Ministry of Livestock and Fisheries. ▪ Ministry of Industry. ▪ Ministry of Women and Children Affairs.

Expected Outcomes	Priority Policies	Priority Actions	Indicators	Time Frame	Responsible Institutions
		<ul style="list-style-type: none"> ▪ Policies and programs to strengthen collaboration between family farmers. 			
6.5 Improving resilience capacity of family farmers to climate-related shocks	<ul style="list-style-type: none"> ▪ Develop and implement policies and programs to strengthen family farmers resilience. ▪ Increase family farmers' capacities to adapt to climate-related shocks. ▪ Increase production and productivity of family farmers. 	<ul style="list-style-type: none"> ▪ Strengthening R&D in climate smart agricultural technologies. ▪ Policies to provide e-agriculture information services to the family farmers to take informed decision on production and marketing. ▪ Developed integrated, multispectral policies, strategies and programmes that address the economic, environmental and social constraints family farmers face. ▪ Encouraging the formation and involvement into farmers group, cooperatives and other local organization to build their social capital. 	<ul style="list-style-type: none"> ▪ Number of policy and programs individual country formulated to strengthen family farmers resilience. ▪ Number of countries providing e-agriculture information to the family farmers. ▪ Number of countries developed integrated policies to face climate-related shocks. 	2022-2028	<ul style="list-style-type: none"> ▪ Ministry of Agriculture ▪ Ministry of Environment, Forest and Climate change ▪ Ministry of Livestock and Fisheries. ▪ Ministry of Disaster Management.

4. Recommendations

The following recommendation are made to support family farming effectively:

- Improve family farmers' access and use of land, water and other natural resources to enhance sustainable and diversified production that improves resilience to climate change, fostering productivity and the economic viability of family farmers.
- Increase rural communities' access to basic social and economic services addressing the multiple social, economic and environmental vulnerabilities of family farmers and promoting the realization of human rights.
- Facilitate and promote production diversification to reduce risks, improve the consumption of healthy and nutritious food in both rural and urban areas.
- Expand and diversify family farmers' economic opportunities to access inclusive markets and food systems, to get adequate remuneration and returns on their investments.
- Value and promote indigenous and traditional knowledge, and social capital.
- Protecting the environment, preserving the diversity of ecosystem, genetic resources, culture and life.
- Post-harvest management, book and record keeping, exposure visit and consultative meeting with relevant stakeholders.
- Impart multi-faceted training to women on agricultural activities, leadership, management and entrepreneurship development in order to transform them into educated and skilled workforce.
- Enabling youth through accessing land, information, education, other natural resources, infrastructure and financial services, markets and policymaking processes related to farming for sustainability of family farming.
- Stimulate young farmers to interconnect traditional, local knowledge with innovative ideas to become agent of inclusive rural development.
- Necessary support to strengthen and encourage the formation of family farmer's cooperatives that will have the capacities to enter into negotiations and partnerships with government and other entities for value-chain related businesses and enterprises.

5. Conclusions

Family farmers are the key proprietors of sustainable development as agriculture practices on large farms are particularly resource-intensive and can hurt the environment. Family farmers produce most of the world's food, in particular the food consumed by the rural and urban poor, preserve biodiversity, manage natural resources and ecosystems, preserve and share traditional knowledge, contribute to the resilience of people and ecosystems, add economic value and foster inclusive economic growth. Notwithstanding, they face difficulty with access to natural, financial, technological and market resources, including inputs, extension services, credit and markets for their products.

Majority of the people in the SAARC region rely heavily on agriculture for their livelihood which is most susceptible to climate change. On the other hand, agriculture is dominated by the smallholder family farmers who are handicapped with access to natural, financial, technological, and institutional and market resources. As a result, the highest rate of poverty, hunger and undernourishment is perceived among the farmers in the region. Therefore, sustainable and resilient agricultural practices are the key to combat the impending challenges in the region. Family farmers have proven capacity to develop new strategies and provide innovative responses to emerging social, environmental and economic challenges.

An enabling social, economic and political environment is necessary for family farmers to lead the change towards zero hunger and poverty, sustainable and healthy food systems, and an inclusive and resilient society. Concurrently, awareness-raising activities focusing targeting specific groups and also integrated in the education system at all levels are significant means to reframe society's perception of family farming and to increase social recognition of their role and multidimensional contribution to sustainable development. In order to support family farming effectively, context-specific policy and program interventions focusing on locally available resources and capacities and ensuring partnerships with family farming organizations and cooperatives in the program/policy cycle is required.

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Chapter 14

Pillar 7

Strengthen the Multi-Dimensionality of Family Farming to Promote Social Innovations Contributing to Territorial Development and Food Systems that Safeguard Biodiversity, Environment and Culture in South Asia

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Abstract

Family farms provide economic, social, cultural and ecological services to the society and play a crucial role in reducing poverty, food insecurity, and malnutrition. The main objective of this paper is to identify constraints and recommend strategies and policies to strengthen the multidimensional functions of family farms in South Asia. The paper is written based on the desk review of literature and secondary data. South Asia has more than 150 million family farms with operated farm sizes of less than 2 hectare. These farms primarily practice low-risk, low-yield and low-profit subsistence mode of farming that perpetuates poverty. The region's family farms face several constraints including small land holding; limited access to technologies, inputs, financial services, information and markets; unfavorable production environments; remote locations with poor infrastructure; and vulnerability to climate change. The strengthening of family farms is central to achieve territorial development, sustainable food systems, and SDG goals. This requires smallholder targeted policies and programs focusing towards improving productivity and profitability, sustainable intensification and diversification of the production systems, improving access to resources and markets, building inclusive and efficient agricultural value chains, promoting and empowering group-based production and marketing, conservation of resources and cultural values, strengthening rural-urban linkages, creating rural non-farm opportunities, and scaling up productive cross-sectoral social safety net.

Keywords: Family farming, multidimensionality, social innovation, territorial development, and South Asia

1. Background

The United Nations has declared 2019-2028 as the United Nations Decade of Family Farming (UNDF) to address the family farming challenges in a holistic way and develop a sustainable global agri-food system that provides sufficient, affordable and nutritious foods while accounting for climate change and growing population. This is central to achieve the 2030 sustainable development agenda: primarily economic growth, social inclusion, and environmental protection. The UNDF Global Action Plan has identified seven pillars to strengthen family farms by addressing their challenges. The main objective of this paper is to stocktake the situation, identify challenges and opportunities, and recommend interventions to develop and empower family farming in the South Asia Region (SAR) with a focus on UNDF Pillar 7: Strengthen the multi-dimensionality of family farming to promote social innovations contributing to territorial development and food systems that safeguard biodiversity, environment and culture.

FAO has defined family farming as "a means of organizing agricultural, forestry, fisheries, pastoral, and aquaculture production which is managed and operated by a family and predominantly reliant on family capital and labor, including both men's and women's. The family and the farm are linked, co-evolve, and combine economic, environmental, social and cultural functions" (FAO, 2013). The definition shows the multi-dimensional role of family farming towards social, cultural, economic, and environmental functions.

The SAR has the largest total population (24% of the world population), second largest poor population (34% of the world poor), and the largest number of family farms (29% of the world family farms) in the world (Graeub, 2016; World Bank, 2020). In the SAR, 65% of the population lives in rural areas and the majority of them depend, either directly or indirectly, on agriculture for livelihoods. The SAR accounts for about 30% (170 million) of the world's 570 million farms. Over 85% of them are small farms with sizes of less than 2 ha and over 90% of them are family farms. India alone accounts for 23% of the world's 500 million family farms. Thus, in the SAR, agriculture is synonymous with small-scale, family farm activity. These farms are owned, managed, or operated by family members who also provide a substantial share of the farm labor and capital. The average farm size in the SAR is 1.16 ha, which is often fragmented into 2-4 parcels (Table 1). The number of family farms continues to increase and their average size decrease.

Although exact data are unavailable, it is estimated that family farms account for about 80% of the total food production in the SAR (FAO, 2013; AFA, 2014). Also, they are the major investors in agriculture and the backbone of the rural economy. They spend a large share of their total expenditure budget on locally produced goods and services, which generates more trickle-down benefits for the rural non-farm economy. In addition, they play a vital role in conserving cultural values and natural resources, and providing ecosystem services (Ye and Pan 2016). Thus, family farms play a significant role in achieving national and regional food security and nutrition, socioeconomic development, environmental protection and wellbeing of both farm and non-farm population. Nevertheless, the majority of farmers and their families remain poor and undernourished.

Table 1. Average farm size and smallholder farms, South Asia, 2020

Country	Farm Size (ha)	Smallholder Farms (% of Total Farms)
Bangladesh	0.63	96
India	1.16	85
Nepal	0.66	95
Pakistan	2.59	65
Sri Lanka	0.60	92
South Asia	1.16	85

Note: The smallholder farm refers to the operate area of less than 2 ha

Source: IRRI (2020)

Family farming is a form of organization of production with a strong link between the family unit and farming activity and it is strongly reliant on family resources (land, labor and capital). In the SAR, family farming is characterized by small farm size; integrated farming systems comprising of crops, animals, fisheries, forestry and pasture; diversified production systems; strong dependence on family labor and capital; management decisions based on the knowledge and experience of the family members; subsistence type production systems with a focus on production for self-consumption; heterogeneity across family and geography; use of traditional knowledge and practices; and, strong linkage with local sociocultural norms and values. For example, in Bangladesh, family labor on average accounts for 40% of the total labor use in food grain production with a range of 25% to 63% depending on crop type. In contrast to commercial farming, each family farm cultivates different types of land and produces different types of

agricultural commodities such as field crops, fisheries, animals, and forest products (Table 2). In each sector, they produce different species and varieties. For example, in the crop sector, they grow a wide range of species and varieties including traditional crops and varieties (Figure 1). Family farms perform multiple functions such as food production; custodians of traditional varieties and biodiversity; conservation of natural resources and environment; provision of ecosystem services; preserving landscape; maintaining community and cultural heritage; protecting indigenous knowledge; fulfilling social and cultural functions; and, socioeconomic development. Also, they have the knowledge to produce locally preferred, culturally appropriate, and nutritious food as part of local traditions (FAO and IFAD, 2019).

Land, labor and livestock are the major assets of family farms. They largely depend on these assets and accordingly pursue diversified livelihoods. They maximize land assets by growing different food and high value crops and by increasing cropping intensity. They maximize labor assets by working on-farm, off-farm, and/or non-farm activities. For example, in Bangladesh, family farm workers are involved in multiple occupations such as crop cultivation, animal husbandry, fish farming, agricultural labor, and/or different non-farm activities. Accordingly, they derive income and livelihoods from a diverse set of farm and non-farm activities (Table 3).

Table 2. Land and livestock assets of smallholder farms, Bangladesh, 2014

Agricultural Assets	Percentage of Households Owning (%)
Homestead land	93
Garden or orchard land	33
Pond or water bodies land	34
Cultivated land	53
Livestock or poultry assets	71

Source: Hossain and Bayes (2018)

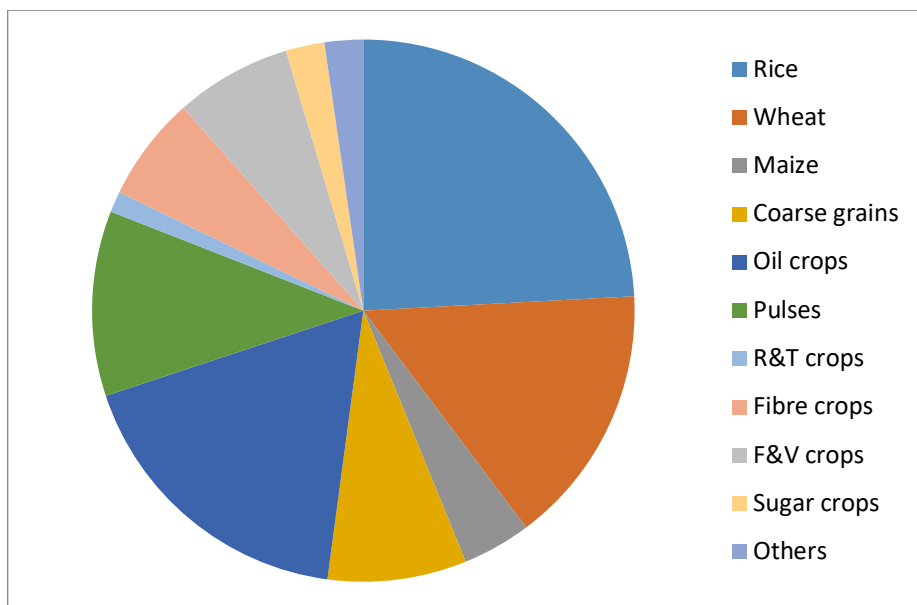


Figure 1. Percentage share of crops in total gross cropped area, South Asia, 2011

Data source: FAOSTAT (2020)

Table 3. Income structure of smallholder farms, Bangladesh, 2014

Economic Activities	Share of Earning Households (%)	Share of Total Income (%)
Agriculture	96	37
Crop farming	74	20
Non-crop agriculture	92	13
Agricultural wages	24	5
Non-agriculture	89	63
Trade and Business	31	18
Services	17	9
Remittance	33	24
Non-agricultural wages	53	11
All activities	100	100
Total income (US\$/household)	-	2304

Source: Hossain and Bayes (2018)

2. Challenges and Opportunities

As compared to larger commercial farms, family farms in the SAR face various constraints such as limited access to resources, technologies and services. This makes family farming challenging, economically unviable in many cases, and professionally less attractive to young people.

2.1. Challenges

Family farms in the SAR face many and varying constraints. These include: small landholding size; limited access to production inputs such as smallholder-friendly technologies, financial services, extension services and information; unfavorable production environments; poor linkage to markets; poor infrastructure and rural-urban linkages; high vulnerability to climate change risks; seasonal volatility of food prices; subsistence type farming; remote location; exclusion of women farmers in access to technology and services; low attraction of youth in farming; and high rates of poverty and low ability to make investments. These constraints affect their capacity to use improved technologies, pursue commercial production and increase production. These challenges compel farmers to undertake low-risk, low-yield, and low-profit agricultural activities and trap them into a vicious cycle of poverty.

Multiple constraints and low profits make smallholder farming unattractive to young people, who may have the knowledge and energy to transform agriculture.

The typical livelihood asset endowment of a family farm in Bangladesh reflects these constraints (Table 4). Family farms have a very low endowment of natural, physical, financial, and social capitals. The quality of human capital is also low. Because of these resource constraints and poor linkages to markets, they have poor capacity to invest in farms and take risks. As a result, they largely practice subsistence mode of production with high priority on food self-sufficiency and consequently lesser importance on the production of high value crops for sale (Figure 1).

In addition, producing only a small quantity of marketable surplus and inefficient supply chains makes it difficult and costly to generate extra income. Furthermore, they are disproportionately affected by climate change due to limited adaptation and resilience capacities.

Table 4. Livelihood asset endowment of family farms, Bangladesh, 2014

Livelihood Assets	Value
Natural capital (ha)	
Own land	0.4
Rented-in land	0.2
Human capital (number)	
Household size (no.)	4.3
Total workers (no.)	1.5
Average education of workers (years)	5.0
Physical capital (US\$)	
Agricultural capital	339
Non-agricultural capital	955
Financial capital (US\$)	
Total loan	373
Social capital	
Household with access to NGO (%)	38

Source: Hossain and Bayes (2018)

In the SAR, women make up 60% of all people employed in agriculture (Chanana-Yag & Agarwal, 2020). Across the region, there is increasing feminization of agriculture observed with the out-migration of working age males to towns and cities leading to an increase in the number of *de-facto* women headed farming households (Chanana-Nag & Agarwal, 2020; Kelkar, 2010, Lahiri-Dutt and Adhikari 2016). This has resulted in increased demands on their time as they continue to have obligations for the care of children and the elderly. Women farmers and agricultural workers face severe challenges from deep seated inequalities from existing social and gender norms which are manifested in limited access to resources, technology, training and extension services (Kelkar 2010). In addition, climate change is exacerbating existing gender inequalities necessary to adapt to climate change (Chanana-Nag & Agarwal, 2020).

2.2. Opportunities

In the SAR, national food and nutrition security are strongly connected to family farms in two-ways: on the one hand, majority of family farms suffer from poverty, food insecurity and malnutrition; on the other hand, family

farms play a vital role to reduce poverty and hunger. Family farms can produce almost equal land productivity to large farms, although they use more workers and less capital per unit area (Table 5). This is an important economic advantage in developing, labor surplus countries, where family farm led agricultural growth can contribute to economic growth and poverty reduction. Moreover, family farms are important means to safeguard biodiversity, environment and culture. They are custodians of traditional crops and varieties, natural landscape, and cultural heritage, which are central to preserving genetic diversity, biodiversity, ecosystem services, and sociocultural values. The genetic diversity of traditional crops and varieties play vital role in developing new varieties to fight climate change and other stresses. Therefore, strengthening family farms is an important pathway to achieve territorial development, sustainable food systems and SDG goals. Several opportunities are available to strengthen the family farms in SAR. First, scale out location and agro-ecology specific improved technologies and practices to sustainably increase intensification, diversification, productivity and profitability of the production system. Second, organize family farms in groups or cooperatives and use these groups in production and marketing. The group-based approach will also increase farmers' access to resources and services. In particular, special emphasis should be placed on addressing gender inequalities in the access to resources and services to achieve inclusive development. Third, strengthen linkage to markets (local, regional, and national) by developing efficient agriculture value chains, especially local value chains, by developing rural infrastructure and services. Fourth, create rural non-farm opportunities and develop knowledge and skills on non-farm activities. Fifth, integrate family farming with agro-tourism not only to earn non-farm income by the farm households but also to safeguard culture and biodiversity. Sixth, collaborate with national and international organizations to share information and knowledge and to access smallholder-friendly technologies.

Table 5. Farm size and productivity of smallholder farms, Bangladesh, 2014

Farm Size (ha)	Percent of Farms (%)	Yield (US\$/ha)
Upto 0.20	27.9	1123
0.20 - 0.40	26.3	1097
0.40 - 1.0	33.6	1044
1.0 - 2.0	10.3	1059
2.0 and above	1.9	1184

Source: Hossain and Bayes (2018)

3. Review of Policies and Programs

The evidence from Asia's Green Revolution shows that the investments in smallholder farms led agricultural growth can result to inclusive development with high impact on food security and poverty reduction in developing countries. Therefore, governments, NGOs, donors, and the SDG agenda emphasize assistance to smallholder farmers, and especially women farmers, to improve their access to resources, technologies, services, and markets. This is central to improve the productivity, profitability, and income of family farm, improve their livelihoods, and sustainably provide multidimensional services to the society. The top priorities of governments in the SAR are to improve national food security, nutrition and rural livelihoods, and accordingly they are making targeted policies, investing huge resources, and implementing various programs to develop smallholder farmers. Such policies and programs include development and dissemination of improved technologies and practices, provision of extension and information services, subsidy on production inputs, access to finance and mechanization services, access to land and water, linking farmers to markets, providing minimum support prices for agricultural commodities, investment in agricultural research and development, and social safety net programs. While these policies and programs are helpful, more targeted and effective programs are needed to improve the wellbeing of family farms.

4. Regional Action Plan under Pillar 7

Table 6 presents the proposed action plan to strengthen the multidimensionality function of the family farming through social innovations.

Table 6. Action plan to strengthen the multidimensionality of family farming in South Asia

Expected Outcomes	Priority Policies	Priority Actions	Indicators	Time Frame	Responsible Institutions
7.1 Improved food security, nutrition and poverty reduction	<ul style="list-style-type: none"> ▪ Increase the availability of smallholder-friendly, nutrition-sensitive, and climate-resilient technologies ▪ Support and incentives to smallholder farmers ▪ Increase rural household income ▪ Social safety net program 	<ul style="list-style-type: none"> ▪ Develop and scale out smallholder-friendly, nutrition-sensitive, and climate-resilient technologies for specific agro-ecologies ▪ Investment in agricultural R&D ▪ Increase farm and non-farm income opportunities ▪ Implement social safety net programs 	<ul style="list-style-type: none"> ▪ Adoption of improved agricultural technologies ▪ Increase budget for agricultural R&D ▪ Agricultural support received by farmers ▪ Income of rural households ▪ No. of social safety net programs implemented 	2021-2025	Governments
7.2 Increased farm productivity and income	<ul style="list-style-type: none"> ▪ Improve access to technologies, credit, services, and market ▪ Promote land rights and land markets ▪ Increase national, international, south-south, and triangular collaborations in agricultural R&D 	<ul style="list-style-type: none"> ▪ Develop efficient agriculture value chains (AVC) ▪ Increase seed and variety replacement rate ▪ Develop policies and invest in farm infrastructure and markets ▪ Develop policies to improve access to farm lands, land rights, and land markets 	<ul style="list-style-type: none"> ▪ No. of agricultural policies and infrastructure developed ▪ No. of land related policies developed ▪ Performance of AVCs ▪ No. of women headed HHs participating in SAVCs ▪ No. of partnerships developed 	2021-2025	Governments and development partners

Expected Outcomes	Priority Policies	Priority Actions	Indicators	Time Frame	Responsible Institutions
		<ul style="list-style-type: none"> ▪ Increase partnership with national and international agricultural R&D organizations 			
7.3 Inclusive and sustainable agri-food value chain (SAVC) development with focus on local economy	<ul style="list-style-type: none"> ▪ Develop efficient and inclusive SAVC with focus on disadvantaged groups such as women ▪ Promote group-based production and marketing and in particular for women HHs ▪ Strengthen rural-urban linkages 	<ul style="list-style-type: none"> ▪ Develop market system and improve farmers access to market especially to women ▪ Develop and empower farmer producer organizations (FPOs) and women farmer organizations (WFOs) ▪ Develop policies and invest in rural infrastructure and markets 	<ul style="list-style-type: none"> ▪ Access to markets and farm infrastructure ▪ Access to resources, technology and services to FPOs and WFOs ▪ No. of FPOs established and empowered ▪ No. of WFOs established and empowered ▪ No. of women headed HHs participating in SAVCs 	2021-2025	Governments and development partners
7.4 Sustainable agricultural production system and environmental protection	<ul style="list-style-type: none"> ▪ Promote women-farmer friendly agricultural intensification and diversification ▪ Promote sustainable use of natural resources ▪ Low use of chemicals in AVCs 	<ul style="list-style-type: none"> ▪ Develop and scale out suitable technologies ▪ Develop inclusive sustainable agricultural value chains (SAVC) ▪ Develop and scale out low-input agriculture 	<ul style="list-style-type: none"> ▪ Area or number sustainable technologies adopted ▪ Area under sustainable intensification and diversification 	2021-2025	Governments

Expected Outcomes	Priority Policies	Priority Actions	Indicators	Time Frame	Responsible Institutions
7.4 Improved biodiversity, cultural heritage conservation, and ecosystem services	<ul style="list-style-type: none"> ▪ Conservation of natural resources, indigenous technologies, knowledge, and cultural practices ▪ Support and incentive to adopt sustainable production system ▪ Support to conserve indigenous technology and cultural heritage 	<ul style="list-style-type: none"> ▪ Provide incentives to use resource conserving and good agricultural practices (GAP) ▪ Develop and scale out sustainable technologies and GAP in agriculture ▪ Provide incentive to conserve indigenous technology and cultural heritage 	<ul style="list-style-type: none"> ▪ Number of resource and biodiversity conserving technologies and GAP used ▪ Incentives received by farmers to adopt sustainable technologies, GAP and cultural heritage 	2021-2025	Governments and development partners
7.5 Rural transformation and improved rural livelihood	<ul style="list-style-type: none"> ▪ Develop rural non-farm employment and income opportunities ▪ Strengthen rural-urban linkages 	<ul style="list-style-type: none"> ▪ Invest in rural non-farm opportunities ▪ Training on non-farm employment ▪ Develop infrastructure to improve rural-urban linkages 	<ul style="list-style-type: none"> ▪ Number of rural non-farm jobs created ▪ Amount invested in rural-urban infrastructure 	2021-2025	Governments and development partners

5. Recommendations

The strengthening of family farms is central to promote inclusive development, achieve the SDG goals and provide multidimensional services to the society. We recommend the following policies and programs to strengthen family farms in the SAR. However, it should be noted that family farms are highly heterogeneous and a diverse group of family farms exist in different territories. Therefore, "one size fits all" policy will not work. Context special policies and programs should be designed and implemented.

- Develop and scale out smallholder-friendly agricultural technologies and practices to improve the productivity and profitability of family farms' production systems.
- Promote the adoption of women-friendly sustainable intensification and diversification production system with a focus on high value and nutritious commodities (crops, varieties, animals, etc.).
- Improve family farms' access to resources, technologies, credit, information, etc.
- Support efficient and gender inclusive food value chains by strengthening the market systems. Empower women farmers and engage youth in agriculture.
- Build and strengthen local value chains so that the benefits of farm and non-farm growth extend to rural societies.
- Organize, empower and leverage local agricultural production and marketing group.
- Design and implement policies to promote lands rights and efficient land markets. Empower family farms to become entrepreneurs and facilitate commercial production.
- Invest in rural infrastructure, agriculture R&D and climate-smart technologies. Enhance family farms' risk-management, mitigation and adaptation strategies.
- Provide support and incentives to conserve natural resources and biodiversity as well as traditional culture and values.
- Promote agro-tourism by integrating family farms and rural lives.
- Create more rural non-farm opportunities and provide support on education and training for nonfarm employment.
- Scale up productive cross-sectoral social safety nets that combine both short-term support and long-term capacity.

- Strengthen national and international collaborations to exchange information, knowledge and technologies related to smallholder farming.

6. Conclusions

In the SAR, agricultural production system is synonymous with family farming. Family farms are owned, operated and managed by the family with integrated field crops, livestock, aquaculture, forestry, and pastoral production systems and rely on family labor and capital. Increasingly, they are women headed households because of male out-migration. Family farms play an important role not only in food and nutrition security but also in the conservation of environment and culture. The strengthening of family farms in the region is central to the development of an affordable, nutritious and healthy food system as well as to achieve inclusive development, environmental protection, and conservation of traditional culture and values. SAR's family farms face several constraints: such as small landholding size; limited access to resources, technologies, services, and markets (especially for women farmers); unfavorable production environment; high vulnerability to climate change risk; seasonal volatility of food prices; and remote location. These constraints affect their capacity to use improved technologies, pursue commercial production, and increase production. These challenges compel farmers to undertake low-risk, low-yield and low-profit agricultural activities, and trap them in a vicious cycle of poverty. The following strategies, policies, and programs are recommended to strengthen the family farming in SAR. First, scale out improved smallholder-friendly agricultural technologies and practices. Second, promote the adoption of women-friendly sustainable intensification and diversification production system with a focus on high value and nutritious commodities (crops, varieties, animals, etc.). Third, improve family farms' access to resources, technologies, credit, information, etc. Fourth, organize, empower, and leverage agricultural production and marketing groups. Fifth, develop gender-inclusive and efficient agriculture value chains, especially local value chains. Sixth, create more rural non-farm opportunities so that family farms can earn additional income. Seventh, provide support and incentives rural households to safeguard culture and biodiversity. Eighth, collaborate with national and international organizations to exchange information, knowledge and smallholder-friendly agricultural technologies. Effective implementation of these policies and

programs will contribute to the sustainable food systems and economic development in SAR.

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Report on UN Decade of Family Farming: Formulating Strategies and Action Plan to Strengthen Smallholder Family Farmers in South Asia

(5-6 Nov 2020, Virtual Mode)

South Asia is a home to 1.7 Billion people, or 24% of the global population, with the largest youth labor force in the world. Of this, 65% of the population resides in rural areas, majority are smallholder family farmers adopting integrated farming system consisting of agriculture, livestock, forestry, fisheries (FAO and IFAD, 2019). Family farmers in South Asia produce at least 70% of the foods in the region with women putting in as much as 80% in farm work. The United Nations has declared 2019-2028 as the UN Decade of Family Farming. The Decade's theme, "Feeding the World, Caring for the Earth," captures the ideas that family farmers are about more than production, they are also about stewardship — stewardship of the soil, seeds, biodiversity and human-animal interactions that make up a family farm.

A regional experts consultation meeting was held on "UN Decade of Family Farming: Formulating Strategies and Action Plan to Strengthen Smallholder Family Farmers in South Asia" during 5-6 Nov, 2020 virtually. This program was organized jointly by SAC, Dhaka, Bangladesh; AFA, Philippines; ICA-AP, India; and FAO RAP, Thailand. The main objective of this program is to formulate strategies and action plan to strengthen smallholder family farmers in South Asia.

In order to formulate Regional Action Plan of the UNDF, the virtual program was organized for 2 days where more than 100 participants-National Focal Point Experts from the SAARC Member Countries, Thematic Experts, Review Penalists, Development Partners and professionals from cross-cutting issues were gathered and discussed on the designated schedule of the program (Figure 1).



Figure 1. Virtual participants in the event held during 5-6 Nov 2020

The program was arranged in such a way that some keynote speakers had presented their keynote speech on the family farming and UNDF; global leaders from FAO, IFAD and WRF had made their presentations on the different perspectives of UNDF; National Focal Point Experts made presentation on National issues and challenges and prospective National Action Plan of the particular countries. Thematic Experts made their presentations on the thematic areas of each pillar of the Global Action Plan of the UNDF in the regional perspectives. Furthermore, Farmers Organization (FOs) had given their presentations on the issues and challenges at the field levels related to family farming. The program was closed endorsing the Joint Communique. On the basis of this event, this book has been published by SAC, FAO, AFA, and ICA.

List of Participants

UN Decade of Family Farming: Formulating Strategies and Action Plan to Strengthen Smallholder Family Farmers in South Asia

Virtual Mode (5-6 Nov 2020)

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Dr. Mohammad Harunur Rashid is working as the Director of Project Implementation Unit, NATP-2, and Chief Scientific Officer of Bangladesh Agricultural Research Council (BARC). He obtained his PhD in 2009 in Agronomy as an IRRI Scholar. He has long experiences in rice-based cropping systems research and development, conservation agriculture, resource-conserving technology, climate change adaptation, technology up-scaling, and research management at the national level. He has published 84 scientific articles.



Dr. Md. Mosharraf Uddin Molla is serving as Member Director of Agricultural Economics & Rural Sociology Division in Bangladesh Agricultural Research Council, Dhaka. He started his carrier as Scientific Officer at Bangladesh Jute Research Institute, Dhaka in 1997. He obtained PhD in Agribusiness & Marketing from Bangladesh Agricultural University, Mymensingh in 2014. He has more than 23 years experience in his field and published 37 research articles in journals, books, bulletins, etc.



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Dr. S. Bhaskar is Assistant Director General in Natural Resources Management Division ICAR, New Delhi since 2016. He is a Member for Board of Management of University of Agricultural & Horticultural Sciences, Karnataka. He involved in monitoring and reviewing the progress of Flag Ship project under NAPCC and monitoring performance of 8 National ICAR Research Institutes. He published 90 research articles in refereed journals, awarded ICAR Best Teacher, NESO best researcher award, Gold Medals both in PhD and Masters.



Dr. Hari Bahadur K.C. is Joint Secretary and Chief of Planning and International Cooperation Coordination Division in the Ministry of Agriculture and Livestock Development of the Government of Nepal. He has more than 25 years of experience in agriculture sector of Nepal. He has a Master's degree in Nematology and PhD in Applied Biological Sciences from Ghent University, Belgium. He has published more than twenty scientific articles in peer reviewed journals, booklets, books, and workshop proceedings.



Mr. Hikmat Kumar Shrestha is a Senior Agriculture Extension Officer in the Department of Agriculture under the Ministry of Agriculture and Livestock Development, Nepal. He has MSc in Agricultural Extension from IAAS, Tribhuvan University, Nepal. Mr. Shrestha started his professional career as in a capacity of Agriculture Training Officer since 1995. He has worked as Senior Agriculture Development Officer in district level providing managerial skills and leadership.



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Brief Biography of Contributors for UNDFE Pillars



Dr. Rudra Bahadur Shrestha is Senior Program Specialist (Policy Planning), in SAARC Agriculture Center, Dhaka, Bangladesh. He is the leader for UN Decade of Family Farming in the South Asia region. He also serves as Visiting Professor in different universities, published dozens of papers in journals, book chapters, policy brief, and edited books.



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Ms. Irish Baguilat is currently the Coordinator for UN Decade of Family Farming and Women Farmers' Agenda at Asian Farmers' Association for Sustainable Rural Development (AFA). For a decade she worked with the International Institute of Rural Reconstruction for a decade as its Applied Learning Manager and Food and Nutrition Security Program Manager. She graduated with a degree in agriculture at the University of the Philippines and is completing Master in Community Development.



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Dr. Devendra Gauchan is an Agricultural Economist with PhD from University of Birmingham, United Kingdom in 2004 and has worked in various national and international organizations in agriculture R&D, agricultural policy, agrobiodiversity, market and value chains and food & nutrition security over 25-years. He serves as Honorary Research Fellow at Alliance of Bioversity International and CIAT, Adjunct-Professor in Tribhuvan University, Nepal. He served as Head of Socioeconomics & Agricultural Research Policy Division at NARC, and as a Post-Doctoral Fellow (2008-2011) at IRRI, Philippines. He is currently serving as General Secretary of Nepalese Society of Agricultural Economist, Nepal.



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Dr. Humnath Bhandari is a Senior Agricultural Economist at IRRI. He is working as a Country Representative of IRRI in Bangladesh. He has more than 20 years of experience in social science research and development activities. His areas of expertise include food and nutrition security, poverty reduction, rural livelihoods, food value chains, natural resources management, climate change, adoption and impact of technologies, and agricultural policy analysis. He has published five books and over 100 research articles in peer reviewed journals.



Dr. Nafees Meah has been the IRRI South Asia Representative since 2016. Prior to that he was Director of the Research Councils UK India Office. He was educated as a chemist at the Universities of Manchester, Toronto, London and Cambridge. He was previously a senior policy maker in the UK Department for the Environment, Food and Rural Affairs leading on environmental impact of food production and on climate change and food security. He then became Head of Science at the UK's Department of Energy and Climate Change.

Brief Biography of Reviewers



Mr. Guilherme Brady is the Head of the Unit for Family Farming and Partnerships with Civil Society Organizations at FAO, and he is the responsible Officer of the Joint Secretariat FAO - IFAD for the United Nations Decade of Family Farming (2019-2028). He holds Master's Degrees in Environmental Policy and Management and in Public Policies and Governmental Management. He worked at the Brazilian Ministry of Agrarian Development with different roles, including being Chief of Cabinet of the Family Farming Secretary of Brazil, and Head of the Minister's Advisory Office.



Dr. Mauro Conti served as Secretariat of the International Planning Committee for Food Sovereignty and as president of Centro Internazionale Crocevia. He holds a Ph.D. in Political Sciences and Development Studies from the University of Calabria and the ISS - Erasmus University Rotterdam. He has published for the Right to Food Watch, Meridiana, Rural Perspectives, and Instituto de Altos Estudios Nacionales (IAEN) de Ecuador. He is currently a reviewer for the Journal of Peasant Studies, a postdoctoral research fellow at University of Calabria and a consultant on Family Farming at FAO.



Ms. Sara Hassan holds a Master's Degree in Development and International Cooperation Sciences and a postgraduate specialization in Development Planning and Project Cycle Management. She worked as a researcher at University La Sapienza and at CeSPI focusing on rural development, women's empowerment, family farming, and as an evaluator of rural development programs in sub-Saharan Africa, North Africa and the Near East. She is currently a Family Farming Consultant in the FAO Partnerships and UN Collaboration Division and supports the FAO - IFAD Joint Secretariat of the United Nations Decade of Family Farming 2019-2028.



Ms. Larissa Domínguez Fuentes, Mexican international affairs professional. She is currently working as an international consultant for the Family Farming Unit of the Food and Agriculture Organization of the United Nations. She has extensive experience on promoting dialogue among stakeholders on areas such as access to land, gender equality, governance of natural resources and family farming. She holds a B.S. on 'International Relations' and a Master's Degree with High Honors on 'Social Development: Gender and Climate Change'.



Dr. Anna Korzenszky holds a PhD in Rural Sociology and currently also member of the CFS High Level Panel of Experts preparing the upcoming Report on youth engagement and employment in food systems. She is working at the Food and Agriculture Organization of United Nations (FAO) in the team responsible for partnership relations with civil society organizations and for the implementation of the UN Decade of Family Farming.



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Mr. Pierre Ferrand, holds a MSc in Tropical Agriculture Development and has over 15 years' experience in implementing food and livelihood security projects in developing countries. Between 2015 and 2018, he coordinated the Agroecology Learning Alliance for South East Asia (ALiSEA, <https://ali-sea.org/>) bringing together all relevant stakeholders active in the field of Agroecology. Since December 2018, he is working as an Agriculture Officer and Regional focal point for Agroecology and the UN Decade of Family Farming at the FAO Regional Office for Asia and the Pacific in Bangkok, Thailand.



Ms. Ma. Estrella Penunia is Secretary General of the Asian Farmers' Association for Sustainable Rural Development (AFA), a regional alliance of national farmers' organizations (FOs) in Asia. Established in 2002, AFA is currently composed of 22 national FOs in 16 countries, representing around 13 million small scale family farmers. AFA promotes farmers' rights to lands, waters, forests and seeds, sustainable, climate-resilient agro ecological approaches in farms, fisheries and forests, strengthening farmers cooperatives and their enterprises, women empowerment and attracting the youth to agriculture, through an integrated program on organizing and movement building, policy advocacy, capacity building and knowledge management.



Mr. Mohit Dave is a Program Manager at the International Cooperative Alliance Asia and Pacific, under the ICA-EU Partnership. He coordinates the program initiatives on international cooperative development, including areas under research, policy, communication, and finance. He is responsible for activities focused on increasing visibility of the cooperative movement, enhancing advocacy, capacity building and networking. He studied Management at the Institute of Rural Management Anand (IRMA) and Engineering at the University of Mumbai, in India.



Dr. Md. Younus Ali, Project Coordinator (Livelihood project-SDF funded) and Senior Technical Officer, SAARC Agriculture Centre (SAC), Dhaka. He obtained his Doctoral degree in Poultry Science in 2016 from Bangladesh. He served for USAID Agricultural Extension Project under the organization of DAM, Associates for Development Services Limited, Concern Worldwide and Palli Karma-Sahayak Foundation (PKSF). He published around nineteen research articles in national and internationally reputed journals.

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