Mapping Antecedents and Outcomes of Marginality and social exclusion among small landholder: A Systematic Review

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Appendix A

Table A1. Highlighted areas with respect to social exclusion and Inclusion of small farmers in previous studies

Areas	Authors ₁	Aspects of Social	From the	Resolutions	Expected outcome
		Exclusion/inclusion	perspective of		
			smallholders		
Climate	Taylor (2013)	Climate vulnerability,	Vulnerable agrarian	Policies for climate	More control over
change		inequality and power,	household having	change adaption in	water, land, labor
		equity, and human	less control over	social justice and	and credit, health
		security.	water, land, labor,	agriculture environment	security, sustainab
			and credit,		livelihoods,
			insecurity		agriculture, and
					economic
					development
	Leichenko and	Poverty is a	Various direct and	Policies for climate	It improves
	Silva (2014)	multidimensional	indirect channels of	change adaption by	economic, social,
		condition and dynamic	climate change and	small farmers is needed	political and
		that is formed through	variability might		environmental
		the relationship of the	worsen small		conditions, povert
		economic, social,	farmers poverty		alleviation,
		political, and			sustainable
		environmental process,			agriculture, and
		historical circumstances,			economic
		individual, and social			development.
		characteristics.			
	Rouf et al. (2015)	Environmental	Injustice and	Policies for poor farmers	Inclusion of poor
		degradation and crop	inequality among	about environmental	farmers, social
		marketing, traditional	poor peasants by	degradation, social	justice, equality,
		culture, social	wealthy peasants.	justice, and inequality	market access,
		organizations, and			Poverty reduction
		cultivation technologies			Sustainable and
		are changing towards			economic

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	mechanized capital agriculture			development
Bijani and Hayati	Water conflict, climate	Small farmers are	Policies for poor farmers	Adaptation to
(2015)	change	the main losers who	for water conflict	climate change,
		are suffering from		improves water
		climate change,		management, more
		drought, water		productivity,
		scarcity, and water		poverty reduction,
		management		sustainable and
				economic
				development
Cohn et al. (2017)	Climate change issue	Smallholders suffer	Needs for smallholder	Increase production
		due to climate	farming systems	capacity, minimize
		changes to	between climate change	hunger, poverty,
		production might	and sustainable	migration, civil
		create various	economic development	conflict, and high
		problems, including		rate employments,
		hunger, poverty,		sustainable
		migration, civil		agriculture and
		conflict, and high		economic
		rate of		development,
		unemployment		sustainable
				livelihoods
Moseley (2016)	Climate change issue	Smallholder	The government should	Increase production
		farming	support smallholders in	capacity, minimize
		marginalization in	climate change	hunger, food
		Botswana much to	adaptation based on a	security, poverty
		do with regional,	grounded	reduction,
		domestic, and	understanding of true	migration,
		global political	factors of	sustainable
		economy as it	marginalization and	agriculture and
		contracts with	insecurity of food and	economic
		climate change	develop pro-poor	development,
			climate adaptation	sustainable
			system	livelihoods
Sattar et al. (2017)	Climate change issue	Social networks,	The government should	Increase production
		education, and	support smallholders in	capacity, minimize
		financial capital are	climate change	hunger, food
		the major factors in	adaptation based on a	security, poverty
		adopting strategies	grounded	reduction,
			understanding of true	migration,
			factors of	sustainable
			marginalization and	agriculture and

				insecurity of food and	economic
				develop pro-poor	development,
				climate adaptation	sustainable
				system	livelihoods
	Tahiru and	Climate change issue	Three different	Government and	Increase production
	Legon (2019)	, and the second	indices to assess the	non-government actors'	capacity, minimize
			vulnerability of	interventions could	hunger, food
			small farmers to	positively impact on	security, poverty
			climate change:	smallholders' farmer's	reduction,
			livelihood effect	livelihood and	migration,
			index, livelihood	neutralized the adverse	sustainable
			vulnerability index	impact of climate change	agriculture and
			and	adaptation processes, to	economic
			inter-governmental	combined traditional	development,
			penal index	and modern practices,	sustainable
			•	also considered	livelihoods
				smallholder farmers	
				socio-demographic	
				characteristics	
Role of	Lee (2005)	Agriculture technology	The benefits of	Reform in policies for	Agriculture
Technology in	, ,	also didn't fulfill the	output with the use	agriculture technology	sustainability,
Sustainable		specific socioeconomic	of technology was	0 03	increase in output
Agriculture		farmer's conditions and	unequally		and export, more job
and Social		local environment	distributed		opportunities,
Exclusion		conditions			economic
					development,
					gender equality
	Hall et al. (2008)	Inequality, without	Farmers are	Police for small farmers	Agriculture
		realizing the broader	formally less	education programs	sustainability,
		ethical and social	educated in	regarding technology	increase in output
		implications of	consequence of	benefits and usage	and export, more job
		transgenic technology	compatibility and		opportunities,
			complexity of		economic
			transgenic		development,
			technology		gender equality
	Pircher et al.	Gender inequality,	Farmers were not	Police for small farmers	Agriculture
	(2013)	socio-economic and land	interested in legume	education programs	sustainability,
		ownership	technology in	regarding technology	increase in output
		differentiation	maize-cropping	benefits and usage	and export, more job
					opportunities,
					economic
					development,
					gender equality,

				Increase in small
				farmers wealth
Hayden et al.	Hurdles to understand	Lack of insurance &	Policy support for social	Agriculture
(2018)	integrated crop-livestock	financing, regional	infrastructure and	sustainability,
	systems (ICLS)	infrastructure	economic incentives to	increase in output
			successfully enable farm	and export, more job
			changes to ICLS	opportunities,
				economic
				development,
				gender equality,
				increase in small
				farmers wealth
Emerton and	Gaps exist between the	The incompetence	The policy needs to	Agriculture
Snyder (2018)	sustainable land	of farmers'	understand the	sustainability,
	management decisions	decision-making	importance of SLM	increase in output
	farmers' preferences to	about practices of	interventions instead of	and export, more job
	make and those which	sustainable land	simply	opportunities,
	farmers actually capable	management (SLM)	benefits/cost-based	economic
	of undertaking, given		measures	development
	their available resources			
	and economic			
	circumstances			
Fandika et al.	Water conflict, climate	Social learning for	Policies required to	Saving time, labor,
(2019)	change	smallholder farmers	encourage farmers in the	water, and help
		in soil water	adoption of user-friendly	farmers to change
		management with	technology	their conventional
		the help of		irrigation systems,
		user-friendly		reduced the water
		technology,		conflict among
		monitoring tool		different farmers,
		(chameleon) was		and increased their
		created for		flexibility to climate
		smallholder		change.
		farmer's mental		
		fitness for soil water		
		management.		
Molina-Maturano	Constraint-based	CBI helps in	Needs to educate	Sustainable rural
et al. (2019)	innovation (CBI) theory	achieving the	smallholders about	livelihoods,
	in agriculture and	bottom of the	innovative ideas in	technology adoption
	sustainable development	pyramid needs of	agriculture context and	by smallholders
	(SD)	smallholders	direction of innovation,	such as agriculture
			innovation networks	machinery,
				substitute farming

Rural Development, Social Exclusion	Midgley et al. (2005)	Lack of appropriate data about rural farmers	Rural people facing marginalization because of policy negligence	The bottom-up approach should be taken to gather rural data	systems, mobile phone applications, water for irrigation equipment and biomass systems Rural development, more job opportunities, sustainable economic development, reduce poverty
	Shortall (2008)	Misinterpretation of social processes	Confused and interchangeable concepts of social capital, social inclusion, and civic engagement	Analysis of civic engagement, social inclusion means, and why participation is assumed to be the standard of different conclusions about who is included and excluded.	Rural development, equality, inclusion, reduce poverty
	Fleming (2009)	Creative economic rural development projects not considering rural people	Creative economic rural development projects more related to economic strategies instead of environment and social justice, not considering class and race	Reexamine economic rural development projects and reconsider class and race of rural people	Rural development, social inclusion, high productivity, and economic development
	Shucksmith (2012)	Inequality, hypermobility, and place	Discursive social position	There is a need to understand not only the mechanism of construction of social position but also how these symbolic and discursive constructions are conscripted within class formation and dominance	Rural development, improve social position and equalities, reduce poverty
	Bock (2016)	The financial crisis, social inequalities	Most of the rural people facing marginalization	Social innovation the new idea of exogenous with political recoupling for rural development	Rural development, improve social position and equalities, reduce

				and inclusion process	poverty
				should be considered	
	Guirado et al.	Lack of social farming	Less empowering	SF support people who	Rural development,
	(2017)	programs	and job	are at risk of social	empowerment,
			opportunities	exclusion through	more job
				engaging them in	opportunities, and
				agriculture activities	improve health
				with the aim of	
				empowering them,	
				giving them job	
				opportunities and	
				including them within	
				the societies	
	Tian et al. (2019)	Elite capture in	Social exclusion was	Concerning social	Rural development,
		anti-poverty programs	happened due to	structural changes,	reduction in
			bad administration	marginalized and	poverty, improve
			of anti-poverty	socially excluded people	productivity, food
			programs and	must be truly considered	security, promote
			saturnine	in policies and rural	equality
			democratic system	development programs	
Rural farmers'	Rye (2006)	Non-migrants	Lack of cultural	Encourage migration	More access to
migrants with			capital and		economic resources
respect to			economic resources		and improve
social					cultural capital
exclusion					
	Rye and	Migrant's worker on	Work in bad	The government should	Equality, improve
	Andrzejewska	cheap wages, which	conditions and poor	implement labor	the income of
	(2010)	creates the problem of	wage rates	regulation that specifies	migrants
		"social dumping"		minimum standards for	agricultural workers
				labor conditions and	and working
				wage levels	conditions
	Han et al. (2011)	House registration	The problem of	Improvements in house	Social inclusion,
		system	social and	registration system are	improve social and
			occupational	needed	occupational
			mobility of peasant		mobility of farmers
			in cities		
	Wang (2017)	Discrimination of	Rural-to-urban	Policies regarding	Improve social
		rural-urban citizen	migrants gained	citizenship law required	inclusion, social
			higher social status		status, equality
			than those who still		
			stay in villages, but		
			their social status		
			still remains		

Sibuloho et al. (2016) Resources Encourage migration Sustainable Resources Invelinced strategy Inv				significantly poorer than those gained by the urban citizens		
Poverty and Hazell et al. New technology might social (2008) badly affect small growing in exclusion of farmers as they are not educated and technical strict standards and rural reads, public goods health care, rural education, and funds by the state are available. Moreover, the state also ensure that proper uneducated muelucated		Sihaloho et al.	Non-migrants	Lack of economic	Encourage migration	Sustainable
Poverty and Bazell et al. New technology might social (2006) badly affect small growing in exclusion of small farmers as they are not small farmers. Continue of the contin		(2016)	C	resources		livelihood strategy
exclusion of farmers as they are not developing small farmers as they are not educated and technical countries and set strict standards and goods health care, rural goods health care, rural education, and funds by the state are available. Moreover, the state also ensure that proper implementation of the smallholder to comply with those standards and dispute and facilitate them with credit markets Pritchard et al. Land-livelihoods nexus (2017) Pritchard et	Poverty and	Hazell et al.	New technology might	Supermarkets are	The government should	Rural development,
small farmers educated and technical strict standards and goods health care, rural goods health care, rural education, and funds by the state are available. Quality, which is much difficult for unclucated smallholder to comply with those standards and sequential or the much difficult for unclucated smallholder to comply with those standards resolving any land dispute and facilitate them with credit markets them with credit markets them with credit markets them with credit markets are available. Pritchard et al. Land-livelihoods nexus Incompetency of comply with those Standards There is a need for resolving any land dispute and facilitate them with credit markets Sustainable regarding the complex decision making importance of land in the development of rural household and their livelihood strategies that are the ways by which households 'hang in', 'step up' or 'out' or certainly, perform other activities Pandey (2018) Inequality Little access to land and livestock, low level of education, ubig family size, and higher dependency ration Policies should be Rural, agriculture Quiser (2019) welfare policies agriculture Gormulated which and economic	social	(2006)	badly affect small	growing in	ensure that the	food security, more
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Hameed and Lack of agriculture Deprived in Policies should be Rural, agriculture Qaiser (2019) welfare policies agriculture formulated which and economic				higher dependency		
Qaiser (2019) welfare policies agriculture formulated which and economic				ration		
•		Hameed and	Lack of agriculture	Deprived in	Policies should be	Rural, agriculture
resources, improves the income of development,		Qaiser (2019)	welfare policies	agriculture	formulated which	and economic
				resources,	improves the income of	development,
education, health, deprived households at improvement in						
income, wealth, local and regional levels income, education,				education, health,	deprived households at	improvement in

			political and social		and health
			participation, and		and nearm
			financial hardship		
Government	Djurfeldt et al.	Policy negligence	Youth in the	Revision of agriculture	Youth will actively
Intervention	(2008)	Toney negligenee	agriculture sector is	policies	participate in
and Social	(2000)		discouraged from	poncies	agriculture activities
			_		and ensure food
Mobility			participating in		security
			their parental		security
	Dribe and	Maak government	occupation Limited access to	Povicion of agriculture	Increase food
		Weak government intervention in the	farmland,	Revision of agriculture	
	Svensson (2008)			policies	production,
		agriculture sector	innovations, and		improve the social status of farmers
			initiatives and		status of farmers
			access to market		
			and extension		
	H. ~ (2000)	High in a quality in a	services	I am d mafanna	Ui ah mua desativites
	Huq (2009)	High inequality in a	Issues of social	Land reform	High productivity,
		recent generation as	mobility and		greater the control
		compare to their old	inequality, fewer		and improve social
		generation	chances for the		status
	NT		upward mobility	D (: 1.	F 1 '
	Ngoc Anh et al.	Income generated	Central and local	Reform in market access	Food security,
	(2012)	through agriculture	government policy	policies	equality, higher job
		activities is less than half	related to labor		opportunities
		from those groups	market access in not		
		making income through	considering farmers		
	D	non-agriculture activities	appropriately		
	Black et al. (2019)	2008 economic crises,	No secure	Policies reform in the	Equal job
		inequalities	employment and	welfare system	opportunities,
			loss of services		economic growth,
			worsen the shift of		agriculture
			social risk		sustainability
Socioeconomic	Pilgeram (2011)	Less-educated farmers	Illiterate farmers	Promote education	Sustainable
status & social			have no privilege		agriculture and
capital			and opportunity of		social sustainability.
			off-farm income		More market access,
			and get less access		more off-farm
			to market		opportunities
	Zhang et al.	Low social mobility due	Difficulty in social	Promote education	High social mobility,
	(2013)	to lack of educated and	mobility due to		improve social
		vocational training	education		capital, increased
					income, food
					security

	Paramitha et al.	Low education, family	Lowest social	Promote education	Upward social
	(2018)	background	position		mobility, highest
					social status
	Wang and Lu	Income gap	Less social	Improve social capital	Increase the income
	(2016)		participation, social		of small farmers,
			trust, and social		gets new knowledge
			networks		and skills
	Rasmussen et al.	Less competence of	Weak leadership	Design leadership	Improve the social
	(2017)	farmers	skills and social	program for small	capital of small
			capital of farmers	farmers	farmers with
			association		income, improve
					leadership skills,
					and directed to
					procedural and
					behavioral change in
					farmers'
					associations.
					Sustainable
					agriculture
Women	Eneyew and	Gender inequality and	Women have less	Clear gender-related	Promote equalities,
inequalities in	Mengistu (2013)	double marginalized	control and access	government policies	women
agriculture		livelihoods concept in	over land, income,	should be articulate to	empowerment,
		agricultural pastoral	livestock, which are	assuring legal rights for	more control over
		societies	core to secure a	men and women	resources, increase
			sustainable		productivity,
			livelihood. local		improve food
			customs violence		production and
			against women and		improves women
			lack of awareness		income, economic
			about		development
			gender-related		
			government		
			interventions,		
			women faced		
			double		
			marginalization		
	Jahan (2018)	Patriarchal system	Women's work is	Reconsider the idea of	Promote equalities,
			different from	Women in Development	women
			men's and having	(WID) model, that the	empowerment,
			less appreciation	participation of working	more control over
			within the societies	women's must improve	resources, increase
			and family. have	their social status.	productivity,
			little access to		improve food

			agricultural		production and
			resources, land,		improves women
			jewelry, money		income, economic
			jeweny, money		development,
					improve social
					status
Women	Malamit at al	Inagualitica	Women farmers	Policies are needed for	
	Malapit et al.	Inequalities			Women group
Empowerment	(2015)		role is invisible	gender equality	membership assists
in Agriculture					in reducing
					workload, more
					control over income,
					and reduce
					inequality,
					production
					diversity, maternal
					nutrition, and
					improves children's
		T 190		D.F. 1.16	diets.
	Centrone et al.	Inequalities	Less participation of	Policies are needed for	Gender
	(2017)		women in water	women farmers	empowerment,
			management	participation in farmer	sustainable
			program in	organizations	agriculture
			agriculture		development
	Benson et al.	Inequalities	Discourage women	Policies are needed for	Women group
	(2017)		global agriculture	gender equality	membership assists
			development agents		in reducing
			through their		workload, more
			participation in		control over income,
			societies,		and reduce
			participation in crop		inequality,
			and livestock		production
			production,		diversity, maternal
			contribution to farm		nutrition, and
			operations		improves children's
					diets
Treating	McMichael and	IAASTD report	Small farmers	Strong need for policies	Achievement of the
sustainable	Schneider (2011)		follow internal	and strategies that	MDGs, food
development			markets produced	stabilize local ecological	security, eradication
goals through			in the report of	knowledge and small	of hunger and
treating			International	farming culture for the	extreme poverty
marginalized			Assessment of	achievement of the	
small			Agricultural	MDGs	
			Knowledge, Science		

		and Technology for		
		Development		
		(IAASTD) instead		
		of to develop		
		specific		
		agro-ecological		
		systems based on		
		bio-regionally		
Abraham and	Access to market and	Social problems	Policies to fix transaction	Attain the SDG
Pingali (2017)	technology	faced by women	costs (e.g., for favoring	related to hunger
		and smallholder in	maize, wheat, and rice)	and nutrition (goals
		agriculture activities	including accessing	1&3), poverty
			credit, R&D, quality	reduction (goals 1 &
			inputs and support	8), social freedom
			commercialization,	and inequality
			diversification, and	(goals 5 & 10) and
			intensification	environment (goals
				12, 13 & 15) which
				are directly
				connected with the
				agriculture sector
Padda and	Agrarian and	Sanitation facilities,	Additional funds from	Improvement in
Hameed (2018)	non-agrarian assets,	deficiency of pure	federal and local	social status,
	energy, education,	drinking water,	governments should be	enhance education
	housing, access to clean	inappropriate	provided for education,	level, improve the
	drinking water, and	energy sources, bad	social welfare,	social welfare of
	sanitation	housing conditions,	agriculture	farmers, agriculture
		and poor economic	development, and water	development,
		resources	supply in rural areas	sufficient supply of
				water, secure
				housing and
				economic
				development
Vamuloh et al.	Farm structure, farmers'	Lack of	Design policies which	Attainment of the
(2019)	demographic, farmers'	participation in	encourage farmers to	SDGs
	attitude and farmers'	contract farming	participate in contract	
	characteristics	program	farming programs	
Liverpool and	Low productivity,	Less participation in	Participation in social	Learn new
Winter-Nelson	climate vulnerability	social networks, less	networks	technology
(2010)		adoption of new		importance, get rid
		technology		of poverty,
				economic growth
Hightower et al.	Underemployment and	Less participation in	Participation in social	Improve trust,

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	(2013)	high poverty	social networks	networks	income, food, and
					health
	Muange et al.	Lack of information	Not interested in	Use more agriculture	Food security,
	(2014)	about crop varieties,	the adoption of	information networks	improved income,
		weak wealth and	improved crop		sustainable
		educational status	varieties due to lack		agriculture
			of information		development
	Cadger et al.	Lack of knowledge	No participated in	Participation in social	Crop-specific
	(2016)	about crop and land	the agriculture	networks	management
		management	development		practice, land
			project		management, and
					sustainable
					agriculture
					development
	Gebrekidan	Low income	Less participation in	Participation in social	Improve social
	Abbay et al.		social networks	networks	status and
	(2019)				sustainable
					livelihoods
Farmer based	Efendiev and	Low cooperative	Not interested in	Encourage farmers to	Economic
organization	Sorokin (2013)	development	participating in	participate in social	development
			rural social	organizations	
			organizations		
	Mohammed et al.	Weak social capital	Less access to the	Encourage farmers to	More access to the
	(2013)		credit facility	participate in	credit facility,
				farmer-based	improve social
				organizations	capital
	Sheikhi and	Distance to the town,	Low social status,	Encourage farmer's	Improves farmers
	Maghsoudi	field components of	farmers education	attitudes for joining the	social status,
	(2014)	agrarian land	level, agriculture	trading system of	education level,
			experience, arable	agrarian activities	market access,
			land for cultivation,		agriculture
			community		experience, arable
			involvement and		land for cultivation,
			amount of loan		community
					involvement and
					access to a loan
Farmer field	Mancini et al.	Farmer education on the	FFS was adapted to	Farmer Field schools FFS	Improve ecological
schools (FFSs)	(2008)	social and	educate integrated	programs should be	knowledge of
		environmental	pest management'	adopted to educate the	farmer, increased
		sustainability of cotton	(IPM) for	farmers	yield levels,
		farming	minimizing the use		sustainable
			of highly toxic		agriculture,
			pesticides that has a		economic
organization	Sorokin (2013) Mohammed et al. (2013) Sheikhi and Maghsoudi (2014) Mancini et al.	development Weak social capital Distance to the town, field components of agrarian land Farmer education on the social and environmental sustainability of cotton	participating in rural social organizations Less access to the credit facility Low social status, farmers education level, agriculture experience, arable land for cultivation, community involvement and amount of loan FFS was adapted to educate integrated pest management' (IPM) for minimizing the use of highly toxic	participate in social organizations Encourage farmers to participate in farmer-based organizations Encourage farmer's attitudes for joining the trading system of agrarian activities Farmer Field schools FFS programs should be adopted to educate the	Economic development More access to the credit facility, improve social capital Improves farmers social status, education level, market access, agriculture experience, arable land for cultivation, community involvement and access to a loan Improve ecological knowledge of farmer, increased yield levels, sustainable agriculture,

		bad impact on the		development
		environment and		
		human health		
Phillips et al.	Farmer Field Schools	FFS provides	Farmer Field schools FFS	Well-educated and
(2014)	(FFSs) as a tool for	agricultural	programs should be	socially strong, more
	poverty alleviation	education to adult	adopted to educate	effective in
		farmers that help	farmers	increasing yields,
		them in improving		adoption of
		livelihoods and		innovative farm
		productivity.		practices,
				sustainable
				agriculture,
				economic
				development
Charatsari et al.	Farmer Field Schools	FFS provides	Farmer Field schools FFS	FFS improves
(2016)	(FFSs) as a tool for	agricultural	programs should be	farmers' skill,
	poverty alleviation	education to	adopted to educate	knowledge, and
		farmers and	farmers	competency and
		improves their		also build social
		social capital		capital within local
				communities
Charatsari et al.	FFS increased	FFS improves	Farmer Field schools FFS	FFS improves
(2018)	acceptability in their	farmers'	programs should be	farmers' skill,
	communities of those	psychological and	adopted to educate	knowledge, and
	farmers who were	social needs	farmers	competency and
	socially excluded			also increased
				acceptability within
				communities and
				improves farmers'
				psychological and
				social needs
Karimi and	Farmer Field Schools	FFS increase	Farmer Field schools FFS	More job creation,
Niknami (2020)	(FFSs) as a tool for	knowledge,	programs should be	crop marketability,
	poverty alleviation	economic,	adopted to educate	execution of organic
		production and	farmers	fertilizers, use of
		social status		micro and macro
				fertilizers, use of
				pesticides,
				sustainable
				agriculture and
				economic
				development

Source: authors' development.