AGRICULTURAL SWIA COMMODITY SELECTION WORKBOOK

NOTE: THIS DOCUMENT PRESENTS WORK IN PROGRESS AND SHOULD NOT BE CONSIDERED CONCLUSIVE

VARIABLE GROUPS	VARIABLES	CHARACTERISTICS
STRUCTURE	Length and "face" of value chain	Factor of high (potentially adverse) HR impact and high human development impact in accordance to the lenght of the chain.
STRUCTURE	Potential for scale up, high impact and large scale	Can existing projects and initiatives be implemented in the work of donors and thus enhance the outcomes and the potential for scale up?
STRUCTURE	Income and profitability of farmers and small/medium scale businesses	Level of impact for the local farmer. Value for those in need of empowerment, better livelihood and enhancement of food security.
STRUCTURE	Constraints and possible market triggers/drivers	Are there any limitations, constraints or gaps in the value chain that limits the possibilities, efficiency or maximum potential for the value chain? – regarding human rights issues, are there any particular violations or aspects of the value chain that restricts the potential for human rights development? Can market triggers/drivers be located and employed in order to fix a constrain?
STRUCTURE	"Locked" sectors, powerful stakeholders and variation in sector	Large, dominant players in the sector? Willingness to cooperate and participate in sustainable projects, initiatives and standards? Variation of suppliers, producers etc in the sector. Monopoly? Potential for progress/impact, already significant and dominant initiatives, policies and projects?
STRUCTURE	Labour & other social variables	What is the impact on labour conditions? Does production of the commodity provide workers decent working conditions and adequate livelihood for them and their dependents? What is the impacy in terms of economic, social and cultural rights?

VOLUME status	Absolute volume	Size and growth in agricultural production (tonnes, non-processed) from 2007 to 2012. This measure gives perspective on stability and tendency of the commodity production.
	Relative volume	Production share of agricultural sector (percent) from 2007 to 2012. This measure gives perspective on the relative importance of the commodity in the national agricultural sector over time. The annual agricultural sector is defined as the summarised weight of raw products from crops, aquaculcure and livestock for a given year (this measure does not take account of product mass, price or labour-intensity which alternativly can define a agrucultural sector).
IMPACT	Vulnerable groups	Vulnerability is determined by context. Focus of the analysis is on groups and individuals who are or may become vulnerable due to link to production or trading of the commodity.
IMPACT	Conflict sensivity and security risk	Cultivation of some commodities tend to be concentrated in conflict areas and some commodities may cause highthen risk of conflicts. For instance, land intensive crops may be linked to land grabbing, which sparks conflicts, potentially resulting in human rights violations.
IMPACT	Illegal trading	Some commodities are particularly prone to illegal trading and thus potentially linked to smuglers' gangs, criminal activities etc., which are major causes of human rights abuses.
POLICY	Political and donor priority (demand aspects covered under "demand drivers and forecast". Focus here is policy trends)	Political and donor priorities may cause significant growth in the volume of some commodities and thus increase in actual and potential human rights impact.

POLICY	Perspective of leadership by high end buyers	Global companies and other dominant buyers may undertake or launch sustainability initiatives targeting certain commodities, which may entail particular attention to human rights aspects of these commodities.
POLICY	Sustainability and responsible business standards and initiatives	Certain commodities are targeted in global and/or sector wide sustainability initiatives, certification schemes etc., which may entail particular attention to human rights aspects of these commodities.
POLICY	Lessons to be learned from other countries	approaches, initiatives etc. with regard to certain commodities in other countries may illustrate how these commodities are potentially linked to either adverse or positive human rights impact.
OPERATIONAL FACTORS	Existing activities on the issue area	Commodities may be linked to existing or upcoming initiatives and activities, which may imply either that a SWIA on the commodities cannot add value or that there is a certain drive on which a SWIA can piggy-back to increase impact.
OPERATIONAL FACTORS	Prior body of relevant learning around the commodity	Good quality documentation and research constitute a significant ressource for SWIAs
OPERATIONAL FACTORS	Logistics	If certain commodities are cultivated predominantly in remote areas, which causes a significant strain on field research and other activiites of a SWIA.
OPERATIONAL FACTORS	Security and safety	Feasibility of ensuring adequate S&S for field research
OPERATIONAL FACTORS	Crop seasonal cycles	Field research has to be scheduled to align with e.g. the timing of harvesting to ensure that field researchers are on site when harvesting workers are present

RICE	
VARIABLE	
Length of chain	Rice is grown in all regions of the country, however, there are some major rice growing areas, such as the Ayeyarwady, Yangon and Bago Divisions which are naturally provided with fertile soil and abundant monsoon rainfall (Naing et al 2008). Rice is mainly grown by small, poor rural farmers and SME´s and farms averaging only 2.3 ha in size (Okamoto in Thaing et al 2008:151). The supply chain for rice consists of producers of seeds and fertilisers, rice producers, collectors and maybe larger collectors, millers, rice wholesalers and retailers and exporters. Furthermore, there is very little cooperation and connections between the different levels in the chain. Fx the local trader, miller, or transport operators have little formal means of cooperation and there is thus a low level of vertical integration and vertical coordination. Few firms operate at more than one level in the chain, as the cultivation of rice is mainly done by small farmers who do not have the capacity to mill and trade their yields (ADBI). Most farmers sell their crop as paddy in their own villages, to a range of primary collectors. Small village mills are common in rural areas and provide custom milling for home consumption. They may also buy on their own account. Town wholesalers play an important role in rice marketing and are often involved in inter-State/Division trade. None collect rice directly from farmers and most do not provide advance payments to collectors. Market wholesalers purchase rice from other traders, collectors and town wholesalers and sell mainly to market retailers. A few retailers purchase from millers and directly from farmers (FAO 2009:23).
Potential for scale up, high impact and large scale	
Income and profitability of farmers and small/medium scale businesses	Most farmers in both Upper and Lower Myanmar sowed seed from their own harvest or from neighbouring farms, rather than purchasing seed. Indicators point to poor transportation and communication infrastructures as a cause for this practice. Certified seeds of improved rice varieties were often thus unobtainable for the farmer, and as a result, a considerable amount of varietal degeneration can be found in rice cultivation, which is likely the result in farmers using seeds from their own harvest for extended time periods (Thaing et al 2008:156). This constraint to the production of rice directly impacts the profitablity of the farm and income of the farmer, and it is essential to improve the practice surrounding certified seeds in order to enhance the profitability for farmer. Despite major investments in rice production by government, it is one of the less profitable crops for small farmers. Prices are often low immediately after harvest, while labor and fertilizer costs are high. The interest rates for informal sector credit, at 6-8% a month, eat into the farmers' potential profit margin (USAID).
Constraints and possible market triggers/drivers	There are several constraints in the rice industry in Myanmar. If these constraints are addressed, however, they have the potential of turning into market triggers as it would improve the competitiveness of the domestic sector in comparison to the global market and thus entering into the production of rice would be more attractive to the farmers and more would then invest in the crop. The constraints are among other the poor quality of seeds, the lack of modern production technologies and poor irrigation systems, a high rate of losses. More specifically the constraints on seed multiplication are the farmers lack of knowledge of seed utilization and the missing avaliability of obtaining this knowledge. Furthermore, the storage facilities for seeds are not organised, the farmers have limited means and inaccessability to loans, and the poor infrastructure all constrain

	the market (UNESCAP). Private sector pesticide companies have been aggressively promoting pesticide use on rice, but farmers have little information about how to use them correctly (USAID) and so this constitutes a significant constraint on the farmers' yields and thus profitability.
Competitiveness	
"Locked" sectors, powerful stakeholders and variation in sector	
Labour & other social variables	The cultivation of rice in Myanmar is a labor intensive business, fx tillaging is done mainly with manpower and is not very mechanised (JGSEE & CEE-PERDO). According to the US department of Labour there are incidents of child labour and forced labour, which most commonly takes place in harvesting the crop. An ILO report stipulates that the number of incidences of forced labor by both the military and civilian authorities fell but noted that government and military use of forced labor of adults and children and the failure to hold perpetrators accountable remained a problem. There are however still extensive cases of forced labor in conflict areas of Kachin and Rakhine states. Reports of forced labor occurred across the country (US Country Report 2013)
Absolute volume	The annual production of rice was relatively stable from 2007-2010 but suffered a decline in output of 11 percent from 2010 to 2011. This setback was caught up with the following year (2011-2012) with a growth of 14 percent. From 2007-2012 the production of rice increased with 3,3 percent.
Relative volume	The production of rice is the most produced crop in Myanmar. From 2007 to 2012 and it has made up between 47-50 percent of the agricultural sector.
Land intensity	
Water intensity (cf. WWF "Thirsty Crops")	
Enviromental and climate footprint	

Demand drivers (incl end-use (export or domestic consumption, MNE vs localbrands/ intl vs regional markets))	
Demand forecast	The prices of rice are expected to decrease until 2017, estimated by OECD-FAO, due to ample supply in some East Asian countries that will meet the growing import demand from other developing countries.
Supply situation	After liberalization of the rice marketing system in 2003, the Government tried to boost rice exports, however, average exports since then has not furfilled its full potential and is stagnated the last couple of years (Indexmundi). For the country as a whole, paddy production is in surplus. However, with national production concentrated heavily on production from the Delta region, rice production is insufficient to meet local requirements in 4 of the country's 17 Divisions. The largest flow of rice is from surplus areas in the lower part of the country such as Ayeyarwady Division, Bago Division, Sagaing Division and Shan State, to the rice deficit areas of Yangon Division, Magwe Division, Mandalay Division and the hilly regions, Shan and Chin States (FAO 2009:23).
Supply forecast	
HuRi risk level	Rice farmers, from five village tracts in Pathein Township, Irrawaddy Division, said that since 2000, they have been pressured to sell their lands at far below their market value to the Yuzana Company, owned by Htay Myint, a Burmese tycoon on a US sanctions blacklist for his close ties to the country's top military leadership (Irrawaddy 2011).
Human development impact (measured by impact on health, education, poverty, food, water, housing, employment)	See Political priority below. Due to the importance of rice, rice marketing and related policies affect almost everyone in the country, whether a producer or a consumer. By empowering women and giving them knowledge, tools and a voice there is a great potential to improve the human development and make a significant impact on the food security through the women. Examples of this can be seen in the report from GRiSP.
Gender aspects	In Asia and Africa, women undertake much of the back-breaking labor in rice production, in among others transplanting and weeding. They are the keepers of the seed and heavily engaged in post-harvest processing (drying and milling), value chains, and seed storage (Cgiar).
Vulnerable groups incl indigenous peoples, "ethnic minority crops"	

Conflict sensivity and security risk	
Illegal trading	
Political and donor priority (demand aspects covered under "demand drivers and forecast". Focus here is policy trends and governmental law)	The government of Myanmar is trying to enhance agricultural productivity and employment in order to minimise poverty and improve food security. This is, among other things, attempted by encouraging farmers to use prescribed package technologies and in this way increase the farmers yields. However, these prescribed packages solely constitute an additional cost for the farmer without contributing to any real increased income for the farmer. The government is focused on the agricultural growth and increasing numbers of yields, however, in terms of sustainability and the impact on livelihood and human development, the government should rather look at the outcome and profit for the single farm than the overall numbers for the whole sector (IDE-JETRO).
Perspective of leadership by high end buyers	
Sustainability and responsible business standards and initiatives (see also separate sheet)	The Sustainable Rice Platform (SRP) is a multi-stakeholder partnership to promote resource efficiency and sustainability both on-farm and throughout the rice value chain. The initiative was created by the United Nations Environmental Programme (UNEP) and the International Rice Research Institute and their goal by the end of 2016 is to offer the global rice supply chain a proven system of sustainability standards, practices, and alternative incentive mechanisms to facilitate wide-scale adoption of sustainable best practices in rice (SRP).
Lessons to be learned from other countries	
Existing activities on the issue area	The local Radanar Ayar Association runs a project in 42 villages of Bogalay Township from 2012-2015, the SEED project, were the aim to increase rice production and improve quality grain, promote the certified rice seed production and establish Farmer's Advisory and Agricultural Testing Unit (FAATU) to support crop production, Good Agricultural Practice (GAP) and sustainable natural resource management (Radanar Ayar). Mercycorps runs food security programs in Mandalay, Rakhine and Chin States, were they provide tools, high-quality seeds and skill-building to boost rice production, fund roads and other infrastructure to connect remote farmers to markets. This is alongside the running of resource centers for vocational and agricultural training and resources that grow household incomes (Mercycorps). The project Stress-Tolerant Rice for Africa and South Asia (STRASA) began at the end of 2007 with IRRI in collaboration with AfricaRice to develop and deliver rice varieties tolerant of abiotic stresses to the millions of farmers in the unfavorable rice-growing environments. A 10-year project with a

	vision to deliver the improved varieties to at least 18 million farmers on the two continents. The project was also anticipated to have significant spillover effects for nonparticipating countries (IRRI).
Prior body of relevant learning around the commodity	
Logistics	
Security and safety (feasibility of ensuring adequate S&S for field research)	
Crop seasonal cycles	The adaptation of HYVs (High Yielding Variety) and the improvement of irrigation systems in some areas of the country has allowed for the cultivation of rice in the dry summer season and for double cropping. However, there are two growing seasons for paddy: monsoon season and summer season. Monsoon paddy is usually rainfed in Ayeyarwady Yangon, Bago and Tanintharyi Divisions and Mon, Kayin and Rakhine States. Similarly, the upland paddy in Chin, Kachin and Shan States are also rainfed. However, monsoon paddy is grown under irrigation in Sagaing, Mandalay and Magwe Divisions, and in other parts of Myanmar where irrigation facilities are available. All of the summer paddy crops in Myanmar are grown with total reliance on irrigation. In the deltaic region of lower Myanmar, water from the rivers and creeks can be irrigated gravitationally when the tide is high (FAO).

PALM OIL	
VARIABLE	
Length of chain	The Central Dry Zone is the main oil crops producing and processing area. There is limited potential for production increase in the Central Dry Zone, but areas such as the Shan hills and the delta region have higher potential for expansion of the production (FAO 2009:7). Palm oil production is highly competitive and economies of scale demand that an oil-palm plantation is at least 4 000 ha in size in order to be able to feasibly operate a CPO mill that processes the Fresh Fruit Bunches from the plantation estates. In Southeast Asia an average individual plantation company manages a plantation area of 10 000 to 25 000 ha. These companies are mostly part of larger agribusiness holdings, with plantation estates ranging from 100 000 to 600 000 ha in several provinces and countries. These holdings in turn usually belong to business conglomerates that are active in various other sectors, such as forestry, telecommunications, banking and construction (Ibid.:26).
Potential for scale up, high impact and large scale	
Income and profitability of farmers and small/medium scale businesses	
Constraints and possible market triggers/drivers	Inefficiency of plants and the low average of yields are a crucial constraint to the market. Most refineries are chemical refineries and often unsafe because of poor maintenance and aging equipment.
Competitiveness	Due to the low average yields, the market of palm oil has a hard time competing with the international market.
"Locked" sectors, powerful stakeholders and variation in sector	

Labour & other social variables	In oil palm plantations workers can face significant vulnerability, patterns of abuse and malpractice, coercion at various stages of the recruitment, migration and employment process. They work long hours for extremely low wages and do physically demanding jobs that leave them susceptible to workplace injuries and poor general health (Verite).
Absolute volume	N/A
Relative volume	N/A
Land intensity	
Water intensity (cf. WWF "Thirsty Crops")	
Enviromental and climate footprint	
Demand drivers (incl end-use (export or domestic consumption, MNE markets))	At the end of June 2007, perhaps related to the inefficient nature of the 65/35 price control mechanism, the government banned the private sector to import palm oil in Myanmar and all imports were to be handled solely by UMEH. If UMEH is able to import palm oil in a timely and sufficient amount, the price of palm oil decreases on the local market. Otherwise, oil shortages will result in an oil price increase (FAO 2009).
Demand forecast	Informal imports allow the country to meet domestic demand of oil and oilcake, as the domestic demand for palm oil cannot be met by domestic production (FAO 2009:14). Global demand for palm oil has been increasing rapidly and largely since the beginning on the 2000´s and palm oil is currently the world's second most consumed edible oil, and is about to overtake soybean oil as the world's most consumed oil (Ibid.26).
Supply situation	Myanmar with its population of about 60 million people is deficient in vegetable oils, including palm oil and thus imports great amounts of the commodity. The situation is not looking to be improved, as there are indications of a rise in demand due to buyers shifting from the costlier peanut oil and at the same time there is a growth in consumption, which could be thanks to the lift of the Western sacntions (PalmOilHQ). Imported palm oil is stored in large capacity tanks in Kye Myin Daing at Thilawa Yangon port (FAO 2009).

Supply forecast	
HuRi risk level	Cases from the Palm oil industry in Inodnesia gives grounded reasons for worries about human rights violations connected to the sector in general and the conditions in Myanmar. In Indonesia, small farmers are dispersed among massive oil palm plantations. The government has provided substantial subsidies for these farmers, while mandating that large commercial operations work alongside the small producers. This policy has helped some 1.5 million Indonesians develop nearly half of the country's oil palm farmland. But surveys of smallholder communities have found that the farmers often struggle to repay the loans issued regularly by large commercial operations. Buried under debt, the smallholders have essentially worked as indentured servants, according to reports. In addition, local governments have been accused of dishonestly obtaining the land from indigenous peoples. Lacking official land titles, local communities are frequently left with no option but to embrace oil palm farming (Worldwatch Institute).
Human development impact (measured by impact on health, education, poverty, food, water,	
housing, employment)	
Gender aspects	
Vulnerable groups incl indigenous peoples, "ethnic minority crops"	Many workers on oil palm plantations all over the world are undocumented and constantly face threats of being denounced to the authorities and of being detained and deported. Workers in subcontracting or outsourcing arrangements are particularly vulnerable, as principals and auditing bodies have no visibility into their working conditions (Verité).
Conflict sensivity and security risk	
Illegal trading	

Political and donor priority (demand aspects covered under "demand drivers and forecast". Focus here is policy trends and governmental law)	Myanmar has adopted restrictive policies on import and export of oilseeds and oilseeds products in the hope of achieving self-sufficiency objectives, but on the contrary the Government have relatively open policies to the import of large quantities of cheap palm oil in an attempt to maintain palm oil prices at low level on the domestic retail market. As a result, Myanmar is increasingly dependant on palm oil import while domestic production is stagnating (FAO 2009:XV). There still exist a level of state control in the import of palm oil, even though it is more liberalized since 2003, but the volume of import and price are still controlled (Ibid.:13). Up until 2009, The Myanmar Edible Oil Dealer Association (MEDA) retained 65 percent of any palm oil imported in the country and paid the importers at 'cost recovery' price.
Perspective of leadership by high end buyers	Yuzana Company are a big player in the industry as has the biggest holdings. The company has however been involved in serious cases of land grabbing in regards to the production of cassava and sugar cane Kachin News & Landaction). Thus, the biggest stakeholder in the sector does not have a good reputation regarding sustainable approaches to doing business and this raises concerns regarding the palm oil industry. It would be of the outmost importance and essential for the success of any sustainble inititives to implement Yuzana in these initiatives.
Sustainability and responsible business standards and initiatives (see also separate sheet)	The RSPO - Roundtable on Sustainable Palm Oil was established in 2004 to promote the production and use of sustainable palm oil for People, Planet, and Prosperity. It is a membership base organization that includes companies, growers, processors, retailers and NGO´s in the formation of a trademark and an international certification scheme (RSPO).
Lessons to be learned from other countries	Examples of very poor working conditions and human rights violations in realtion to the production of palm oil. On Malaysian plantations, it is normal practice to confiscate workers' visas, passports, and work permits, thus restricting the workers' ability to leave the plantations. If the workers manage to escape the exploitative conditions, it is police policy to return found workers to the plantations. Additionally, without their papers, it is impossible for escaped workers to find legal work elsewhere in Malaysia. Native Malaysians and migrants are both victims of these procedures (Accenture).

Existing activities on the issue area	
Prior body of relevant learning around the commodity	
Logistics	
Security and safety (feasibility of ensuring adequate S&S for field research)	**VARIABLE**
Crop seasonal cycles	Oil palms have an economic lifecycle of 20 to 25 years with an average annual oil yield of 3.5-5 t/ha making it the highest oil bearing crop in the world. Planting can be done in any season. However, the best period is June to December. While harvesting peaks between July and September (Malaysia and Indonesia, assumed similar to Myanmar) (ICEX).

COFFEE & TEA

Length of chain	The supply chain for coffee is often complex and involves many different actors. There are the growers, who usually work on very small plots of land of just one or two hectares. Many do some primary processing, drying or hulling, themselves. Then there are intermediaries, who may be involved in many aspects of the supply chain. They buy coffee at any stage between coffee cherries and green beans, they do some of the primary processing, or they collect together sufficient quantities of coffee from many individual farmers to transport or sell to a processor, another intermediary, or to a dealer. The chain also involves the processors, who can either be individual farmers who have the equipment to process coffee, or a separate processor, or a farmers, co-operative that pools resources to buy the equipment. Higher up we have government agencies, where in some countries the government controls the coffee trade, perhaps by buying the coffee from processors at a fixed price and selling it in auctions for export. High up in the chain we also see the exporters, who buy from co-operatives or auctions and then sell to dealers. The dealers/brokers supply the coffee beans to the roasters in the right quantities, at the right time, at a price acceptable to buyer and seller. The roasters constitutes people like Nestlé who turns the green coffee beans into the final product. Companies like Nestlé also adds value to the product through marketing, branding and packaging activities. And finally there are the retailers, who are the sellers of coffee products which range from large supermarkets, to hotel and catering organisations, to small independent retailers (Businesscasestudies). Northern Myanmar (Shan States, Mandalay Division, Chin State, Kachin State, Kayin State, Bogo Division, Rakhine State, Mon State) have the potential to produce large amounts of high quality Arabica coffee due to their good quality, red soil plateaus and other suitable soils, at elevations above 3300 ft (1000 m), well suited amounts of rainfall and a distinctive, essential dry season. For farmers in remote areas, coffee is an ideal crop which, when well-cared for, produces a good income, and because the coffee is largely nonperishable and robust, it transports easily without damage (FAO 2005). The producers of coffee are usually small or medium-sized plants, but large factories do exist, mainly to produce regular as well as instant (soluble) coffee (ILO). The tea supply chain tends to be complex, with many actors, producers, collectors, traders/brokers and packers involved. However, the buying and retailing end of the market is dominated by a handful of powerful multinational companies that are in a strong negotiation position and are able to skim off most of the value in the chain (TCC).
Potential for scale up, high impact and large scale	
Income and profitability of farmers and small/medium scale businesses	

Constraints and possible market triggers/drivers	
Competitiveness	
"Locked" sectors, powerful stakeholders and	
variation in sector	
Labour & other social variables	Most of Myanmar's tea is grown in Shan State. The combination of a rising demand for brides in China and a bad market for dried tea and thus few availiable jobs draws away many of the workers needed to cultivate the crop. Instead of working on the tea plantations, where there are no jobs
	avaliable, many young Palaung and Shan women are drwan towards the promise of better lives in China. However, many ends up getting married to Chinese men instead and is thus being used in a bigger scheme of human trafficking and to the benefits of brokers. This tendency stipulates the issue of human trafficking and its prevalence in the Shan State, as the Chinese men are willing to pay a lot of money for a Myanmese bride (MyanmarTimes).
Absolute volume	The production of coffee and tea has increased each year from 2007-2012 with annual growth rates between 1 and 9 percent. The overall grwoth in production in this period was 23 percent.
Relative volume	Even though the production of coffee and tea has significantly increased from 2007-2012, it only makes up 0,05 percent of the sectoral output - a share that has beeen relatively stable over the given period.
Land intensity	
Water intensity (cf. WWF "Thirsty Crops")	
Enviromental and climate footprint	

Demand drivers (incl end-use (export or domestic consumption, MNE vs localbrands/ intl vs regional	There are indications of that Green Mountain Coffee will enter into negotiations with coffee farmers there to begin importing their beans into the United States for the first time and thus a whole new market (USA Today).
markets))	
Demand forecast	
Supply situation	While world tea production doubled over the past 3 decades, demand is lagging behind, creating a situation of oversupply. This is one of the key reasons for continuous low prices for tea producers (TCC).
Supply forecast	
HuRi risk level	Ministry of Home Affairs statistics, collected by the Central Body for Suppression of Trafficking in Persons, show that Shan State has accounted for most of the human trafficking cases over the past five years. The statistics show that 80 percent of human trafficking cases involve people who have been taken to China. These cases of human trafficking can according to some sources be traced to the poor opportunities and the bad job situation in the tea production sector in the Shan State (PWO & Myanmar Times).
Human development impact (measured by impact on health, education, poverty, food, water,	The production and export of tea is vital to the economies of producing countries in providing livelihoods for communities in remote and poor rural areas.
housing, employment)	
Gender aspects	The sex and age distribution of the working population in coffee is unknown or based upon unreliable and insufficient data, even though female population among workers is increasing (ILO). See section of "prior body of relevant learning.." for more information.

Vulnerable groups incl indigenous peoples, "ethnic minority crops"	Namhsan, Kyaukme, Namkham, Kutkai, Kalaw, Yatsouth, Mong Hsu and Mong Tone townships in Shan State are the major tea growing areas, with most farming done by members of the Palaung ethnic group.
Conflict sensivity and security risk	
Illegal trading	Indications of illegal import of dried tea leaf from China. And while imports make up about 75 percent of the market, most domestic farmers have changed their operations to make wet tea leaf for use in salads in order to make profit (Myanmartimes).
Political and donor priority (demand aspects covered under "demand drivers and forecast". Focus here is policy trends and governmental law)	
Perspective of leadership by high end buyers	The Nescafe Plan is a global initiative by Nestlé that supports responsible farming, production and consumption of coffee (Nescafe). Unilever purchases around 12% of the world's black tea supply. Much of this is for Lipton, the world's leading tea brand. In 2007 they became the first major tea company to commit to sustainable sourcing of tea on a large scale, and their future goals by 2015 are to have the tea in all Lipton tea bags sourced from Rainforest Alliance Certified™ estates. By 2020, 100% of Unilever's tea, including loose tea, will be sustainably sourced. (Unilever). Starbucks' own private standard, termed Coffee and Farmer Equity (C.A.F.E.) Practices, sets basic social and environmental criteria for several thousand certified farmers and co-operatives in more than two dozen countries. Their standard includes quality parameters and has been one of the fastest

	growing. Nespresso is a subsidiary of Nestlé and provides coffee brewing equipment on a membership basis to clients around the world. In cooperation with Rainforest Alliance the private Nespresso AAA standard (Nespresso AAA Sustainable Quality Program) has been developed, with a focus on high quality. It features social and environmental practices and coffee is mainly purchased from Latin-America, and some farms in Africa and Asia. Starbucks has plans to enter the market in myanmar and is thus a considerable high end buyer, who must be included in the sustainable approach (BangkokPost).
Sustainability and responsible business standards and initiatives (see also separate sheet)	Fairtrade standards are designed to support the sustainable development of small producer organizations and agricultural workers in the poorest countries in the world. This is done by ensuring the right price for the farmers and facilitating long-term trading partnerships and enable greater producer control over the trading process. Fairtrade has standards in a long list of commodities, but the standards are significantly dominant in the coffee and tea industries (Fairtrade). 4C is the Common Code for the Coffee Community. Their goal is that all directly purchased green coffee will be compliant with the internationally recognized 4C sustainability standards by 2015 (4C). The International Coffee Organisation has in the hope of devolping a sustainable coffee economy created the International Coffee Agreement 2007. The main objective is to encourage members to develop a sustainable coffee sector in economic, social and environmental terms (ICO). . The Sustainable Coffee Program (SCP) by IDH will help support millions of farmers in the development of a sustainable coffee production system. The ambition of the consortium is to drive sustainable green coffee sales from 8% to 25% by 2015 (IDH).
	The IDH Tea Program promotes sustainable tea production in Africa and Asia, and sustainable procurement in Western Europe and Asia. It is a cooperation of Europe and Asia's largest tea packers, and the most important certifiers and NGO's in the sector (IDH). The Rainforest Alliance launched its tea certification program in 2007, which is a certification, verification and validation stamp that indicates that a company, organisation, farm or estate works to conserve biodiversity and improve livelihoods by promoting and evaluating the implementation of the most globally respected sustainability standards (Rainforest Alliance). The TCC, Tropical Commodity Coalition, consists of ten non-governmental organisations and cooperates with NGOs and trade unions in coffee, tea and cocoa producing countries to improve the social, environmental and economic conditions at the beginning of these value chains (TCC).
Lessons to be learned from other countries	
Existing activities on the issue area	

Prior body of relevant learning around the commodity	A study of the "Gender and Value Chain Development" by DANIDA describes in a case study from countries in Latin America how the change from conventional to Fairtrade–organic production methods has altered the gender balance in coffee work. On the one hand, significantly higher quality requirements tend to increase women's labour burdens since women typically perform key quality-producing steps such as washing, drying, and selection. On the other hand, Fairtrade– organic cooperatives may gain access to technical support and credit support, allowing them to purchase mechanized wet mill equipment that can dramatically reduce women's labour (DANIDA).
Logistics	
Security and safety (feasibility of ensuring adequate S&S for field research)	
Crop seasonal cycles	

PULSE & BEANS
VARIABLE

Length of chain	Most of the farms where beans and pulses are grown are small, one or two hectare holdings, and beans and pulses sector does not feature the sort of large-scale agribusinesses that can afford to buy better seeds and technology. Myanmar produces over 20 varieties of beans and pulses and because of relatively low national consumption, many of these varieties are export-only commodities. The main bean and pulses varieties produced in Myanmar are matpe, green mung bean, and pigeon peas. The supply chain of Myanmar's beans and pulses trade includes farmers, local traders, Yangon traders, large wholesalers/exporters and agents. The supply chain can be intertwined at different levels and farmers rarely do direct negotiations with large wholesale traders, which means that they rely on several middle parties to make their deals (Thure Swiss). For soybean the largest sown areas were in Shan State (north and south), followed by Ayeyarwady Division, Shan State (east), Bago Division (west), Sagaing Division, and Mandalay Division.
Potential for scale up, high impact and large scale	
Income and profitability of farmers and small/medium scale businesses	Beans and pulses might be lower-profile than rice, but are nonetheless a vital cash crops for as many as 10 million Myanmar citizens who are tied to the trade; most of them farmers and their families, which means up to one-sixth of the population of Myanmar make a living from beans (IBT). Indications of farmers making more money growing beans and pulses than from rice (TheIrrawaddy). Especially the production of beans and pulses is generally seen as more profitable than rice in the winter season, in part because of much lower labor requirements and input costs. Prices, however, are especially volatile because 70% or more of pulses such as black gram, green gram, pigeonpea and chickpea are exported to countries, especially India, whose demand from one year to the next is very unpredictable (USAID).The fact that farmers do not negotiate their own price is not ideal, as it makes farmers dependt on local traders and other middle parties.

Constraints and possible market triggers/drivers	The bean and pulses sector faces some of the same infrastructural challenges as rice do. These are poor conditions of roads, long distance of tranporting the commodity and thus a costly part of the production. Making better use of the rivers in the transportation of the commodity could function as a trigger for the market. However, a need for modernization of the vessels are essential. It is a serious constraint to the market and the competitiveness of farmers, that they do not have financial capacity to use the best available high-quality seeds on the market due to their high prices. Instead the farmers often then resort to mixed or inferior quality seeds as high-quality seeds are either unavailable or inaccessible because of their high prices (Thura Swiss).
Competitiveness	Although beans and pulses industry in Myanmar has gained itself an international reputation, declining world crop prices and a high dependency on the Indian market has made market conditions more vulnerable. If the market are to continue to grow it is necessary to produce more value added beans and pulses, put in place technical and financial assistance to farmers and promote private and public industry reserach and development (Thura Swiss). Furthermore when exporting beans and pulses to fx the US market it is essential to put in place controls on chemical use in beans and pulses (Theirrawaddy).
"Locked" sectors, powerful stakeholders and	
variation in sector	
Labour & other social variables	According to the US department of Labour there are incidents of child labour and forced labour. The production of beans and pulses are relatively labour intensive, however, currently the farmers face difficulty in the harvesting of beans and pulses as there are shortage of workers, as many migrate and become migrant worker in fx Thailand (Eleven).
Absolute volume	The production of beans and pulses has steadily increased in the period from 2007-2012 with annual growth rates between 4,5 and 13 percent. The production has expanded 40 percent in this period.
Relative volume	The production share in the agricultural sector has steadily increased from 6,5 percent in 2007 to 8 percent in 2012.

Land intensity	
Water intensity (cf. WWF "Thirsty Crops")	2,000 litres per kilogram commodity. Ranking 4th high on the WWF "Thirstry Crops" list.
Enviromental and climate footprint	
Demand drivers (incl end-use (export or domestic consumption, MNE vs localbrands/ intl vs regional markets))	Beans and pulses are an export commodity, with almost three-quarters of the 1.9 million tons of exports going to India. The country exports to 52 countries in all, but India is by far the most important and thus a strong driver in the demand of the commodities (TheIrrawaddy).
Demand forecast	Pulses are becoming an important export crop (FAO 2009:18). For soybean there has been an in increasing trend in soybean cultivation in the 3 Shan State areas, where soybean is used for daily consumption. In other states and divisions the trend fluctuates (Ibid.:19).
Supply situation	The production of pulses has been on the rise since 2003/04 (FAO 2009:18). Myanmar is the largest producer and exporter of beans and pulses within the ASEAN region (Thura Swiss).
Supply forecast	
HuRi risk level	
Human development impact (measured by impact	Pulses are consumed almost daily in most areas of Myanmar, especially in dry-zone regions. Most of the production is however exported, and beans and pulses are to be considered mainly as a cash crop.
on health, education, poverty, food, water,	

Gender aspects	Women are to be considered an important asset in improving and quality-assuring the sector for beans and pulses according to the study mentioned below by Cgiar on use of the Rwandan women as experts.
Vulnerable groups incl indigenous peoples, "ethnic minority crops"	
Conflict sensivity and security risk	
Illegal trading	
Political and donor priority (demand aspects covered under "demand drivers and forecast". Focus here is policy trends and governmental law)	
Perspective of leadership by high end buyers	

Sustainability and responsible business standards and initiatives (see also separate sheet)	Sustainability Initiatives - Round Table on Responsible Soy Association are working on the task of improving the soy supply and value chain and collectively try to anticipate and prevent negative impacts through the facilitation of a global dialogue on soy that is economically viable, socially equitable and environmentally sound. Furthermore they wish to reach consensus among key stakeholders and players linked to the soy industry and act as Forum to develop and promote a standard of sustainability for the production, processing, trading and use of soy. Also the promotion of sustainable projects and the monitoring of the global soy production is at the forefront of this association (RTRS).
Lessons to be learned from other countries	Case study of the Rwandan women being experts in the production field of beans. In this case, the farmer experts are women who are responsible for most of the bean production in Rwanda. The case illustrates that locally sensitive approaches, respect and careful listening have high payoffs in the delivery and adoption of a set of high performing varieties flitting location-specific microniches and meeting the needs of smallholder bean producers in Rwanda (Cgiar).
Existing activities on the issue area	
Prior body of relevant learning around the commodity	Pulses are an important component of crop rotations, they require less fertilisers than other crops and are a low carbon source of protein. Legumes are part of the rotational system farmers can use to maintain soil fertility (CICILS IPTIC).
Logistics	
Security and safety (feasibility of ensuring adequate S&S for field research)	
Crop seasonal cycles	Myanmar's beans and pulses are usually grown during the winter period beginning in November making use of the residual moisture left in the soils after rice crops have been sown. Growing periods for beans and pulses are usually much shorter than for other crops such as rice, only taking
	about 3 to 4 months from plantation to harvest. Winter crops from November are usually harvested in January. Those crops planted at a later period during winter are usually harvested around February or March.

OIL SEEDS	
VARIABLE	
Length of chain	Oil seed crops has alongside pulses the second largest cropping intensity, only surpassed by cereal crops. Due to the many political shifts over the years in Myanmar, the oilseed sector has increasingly become complex owing to the imposing of various agricultural trade policies. Two major oilseeds, sesame and groundnut, play a crucial role in the sector by contributing about 25 per cent and 28 per cent of total oilseed production and about 30 per cent and 42 per cent of total edible oil production, respectively (FAOSTAT 2008 in ISAS 2013). Other popular edible oilseeds are sunflower, rape and mustard and cotton seed. Grown primarily in the central "dry zone" which forms the north-south axis of the country, oilseeds provide an important food source and livelihoods for thousands of farming households. Sesame is produced both byu small holder farmers and at larger industrial scales. Sesame can be grown anywhere cotton can be grown. Contractual agreements between farmers, traders and processors are virtually non-existent, and will fail to develop unless participants see real benefits from establishing long-term relationships. When they exist, contractual agreements are used for sesame export to higher
	end markets such as Japan. From the trader side, the main drivers for such agreements are the need to ensure sufficient supply of high quality sesame seeds and allow traceability. From the farmer side, the main interest in entering in contract agreement is to access credit. Exporters are providing credit to farmers before planting, against the delivery of an agreed quantity of sesame at an agreed price a few points below the expected market price (FAO 2009).
Potential for scale up, high impact and large scale	
Income and profitability of farmers and small/medium scale businesses	No data avaliable on the shares of large scale investors production versus the small scale farmer prodction of oil seeds and sesame in Myanmar. Data from Ethiopia, were the economy is centered around the production of sesame, shows that over 400 large-scale investors are each cultivating an average 600 hectares of sesame were as local farmers cultivate up to 12ha each. Were the large scale investors having a slight majority share in the acres of land cultivated, however, that still leaves many individual farmers and livelihoods for a large share of the Ethiopian people (HEA). Assuming that Myanmar and Ethiopia are not that far apart in relation to labor, production shares and division of lands by small farmers and large scale investors, this sector constitutes a very important source to income for the small farmer if the value chain and the production is optimized and supported sustainably. This especially considering Myanmar is one of biggest producers of sesame. Thus this sector has the potential to impact many households through a strenghtening of the small scale production and thus the income and profitability of farmers.

Constraints and possible market triggers/drivers	Myanmar is left on the side of fast growing market opportunities as milling equipment to produce high quality sesame oil and quality control systems are not in place (FAO 2009). This is to be considered a dominant constraint on the market and must be approached if the sector and economy around sesame is to be improved and expanded.
Competitiveness	Myanmar is the second largest producer of sesame and the fifth largest exporter in the world sesame market, and is thus a significant player on the world market for sesame. Myanmar remains a leading groundnut producer but has been left out from the international market opportunities, because of prohibition on export since the 1980s and is thus set back, disadcantaged in regards to competing with the global market due to many years of export ban.
"Locked" sectors, powerful stakeholders and	
variation in sector	
Labour & other social variables	Sesame is traditionally a crop that has a high level of manual work and thus is very labor intensive. Hand labor is required in order to avoid excessive seed loss during harvesting, as most seed capsules open at maturity and it is necessary to cut the stalks and dry them in the field before the pods open. Even when using hand labor there can be relatively high losses of seeds during this practice . So especially during the periods of weeding and harvesting sesame is a very labor intensive crop.
Absolute volume	The production of oil seeds increased with more than 25 percent between 2007-2009, but stalled in 2010, and decreased significantly in 2011 and 2012. The production therefore overall contracted with 20 percent from 2007-2012.
Relative volume	The production share of oil seeds in the agricultural sector was 2,5 percent in 2007 and peaked in 2009-2010 with 3 percent, but was down to a 1,5 share in 2012, due to the following contraction in production.
Land intensity	
Water intensity (cf. WWF "Thirsty Crops")	

Enviromental and climate footprint	
Demand drivers (incl end-use (export or domestic consumption, MNE vs localbrands/ intl vs regional markets))	A major decline in the share of groundnut production crushed for oil and meal over the past two decades reflects the increasing availability of cheaper, low-fat vegetable oils, such as soybean and palm oil. These oils have steadily substituted groundnut oil and meal. Globally groundnut meal must also compete with meal from other oilseeds and with cereal-based products such as maize gluten. A major increase in edible/snack groundnut occurred globally mainly in developed countries and fast growing economies in Asia (FAO 2009).
Demand forecast	Developing countries, in particular China and other Asian countries, should continue to dominate the rise in vegetable oil consumption (OECD-FAO2011:108), and thus there seems to be indications of a rise in demand for oil seeds.
Supply situation	Producers in Myanmar still devote 60 percent of their production for crushing (oil and cake) (FAO 2009).
Supply forecast	World oilcrop production could climb to an all-time high and global supplies of oils/fats should also rise thanks to a recovery in high oil yielding seed output. Regarding the oils market, adequate supplies and ample stocks are expected to keep prices stable at their current relatively low level (FAO
	2013). Assuming normal yields in all producing regions, world production of oilseeds should rebound in marketing years 2013 and 2014 resulting in a sharp reduction of international oilseeds and products prices. After this correction, prices are expected to increase slowly based on strong food and fuel demands of vegetable oil and a solid feed demand for protein meal. Relative profitability of oilseeds versus coarse grains is expected to favour the distribution of land toward oilseeds and lead to a 26% increase in world production when combined with yield gains (Ibid.).
HuRi risk level	
Human development impact (measured by impact on health, education, poverty, food, water, housing, employment)	Myanmar's oilseed and edible oil sectors comprise two major oilseeds and three major edible oils (groundnut oil, sesame oil, and imported palm oil) to meet domestic needs since edible oil is the second most important staple food for local people (ISAS). This emphasizes the sector of oil seeds´ significance on the livelihoods of the Myanmese people. Private imports og oil seeds are allowed by removing the government's monopoly policy, however the quantity restriction is still imposed on palm oil trade. The restricted quota quantity depends on the domestic demand and prices of edible oils since poor consumers rely on the ungraded, cheapest, and poorest quality edible oils. Therefore, liberalizing palm oil imports would benefit domestic consumers (Ibid.) and has the potential to improve livelihoods and food security as edible oils are an important food source.

Gender aspects	Knowledge from the oil seeds sector in Uganda indicates that men are mainly involved in opening the land and the selection of seeds in addition to making the decision regarding the production, whereas women are more involved in weeding, sorting, threshing and harvesting (IFAD 2010)
Vulnerable groups incl indigenous peoples, "ethnic minority crops"	
Conflict sensivity and security risk	
Illegal trading	
Political and donor priority (demand aspects covered under "demand drivers and forecast". Focus here is policy trends and governmental law)	Ministry of Agriculture and Irrigation (MOAI) undertakes the tasks of enhancing the quality of seed production, promoting knowledge by training and education and creating new knowledge by undertaking the task of research and development within the sector (ABDI). In 2011 The Seed Law was drafted and put into effect by january 2013. This law stipulates the assistance to the development of the agricultural sector in generel by using pure seed. Furthermore the law emphasizes the promotion of the seed business in a commercial way and the encouragement for enabling participation in seed production and carrying out seed research of the Government departments, organizations and individuals (Ibid.). DOA is responsible for further development of the seed industry in Myanmar. Studies show, that if the government were to completely lift the restrictions on imported palm oil, it would have a significant impact on the overall welfare generated by the oil seed sector. Indications show that trade liberalizations will most likely benefit the oilseeds sector, but the positive impact is not quantifiable to the whole economy and all people directly or indirectly involved in the sector. This becomes evident as if restrictions on import of palm oil were lifted, the more pricier oil seeds as groundnut and sesame would have to compete with the cheaper imported palm oil. Groundnut and sesame oil would most likely come out as losers of this battle by experiencing a
	decline in demand for these crops. Consequently, farmers engaged in oilseed production would lose the incentive to boost production and this would result in welfare losses (ISAS)
Perspective of leadership by high end buyers	

Sustainability and responsible business standards and initiatives (see also separate sheet)	Due to scarce or even missing information on sustainable standards for the oil seeds market, it must be concluded that there are no significant, legitimate standards in place for this sector.
Lessons to be learned from other countries	A study undertaken by IFAD in Uganda showed the potential for empowering women and improving the lives of the poor through the development of the entire value chain for sesame. The development of the value chain included governmental support and aid for small scale farmers in order for them to plant on bigger areas and this increase their production. Furthermore if stakeholders can obtain quality and improved varieties of seeds, the farmers will be able to plant improved seeds and this will again enhance their yields. Ultimately this empowering and sharing of knowledge will enable the farmers to market their own produce because of the availability of market information meaning that they will no longer be cheated by middlemen (IFAD 2010).
Existing activities on the issue area	In 2004 Myanmar received a US$12.3 million loan from OPEC Fund to boost oilseed production. This should be achieved over a 5 year period by the construction of seed conditioning plants, storage facilities, solvent extraction plants and a palm oil mill with effluent treatment plant. Furthermore an
	improvement of seed harvesting and cleaning facilities, laboratories and a refinery in Yangon were initiated alongside the promotion of consultancy services (OFID).
Prior body of relevant learning around the commodity	
Logistics	
Security and safety (feasibility of ensuring adequate S&S for field research)	

Crop seasonal cycles	Eighty two percent of the national production of oilseed crops is from lowland Myanmar in the dry zone as well as the delta region where groundnuts and sesame are the main crops. Fifteen percent of the oil crops production originates from the hills where soybean, groundnut, niger and mustard seeds are grown. The coastal divisions account for only 3.5 percent of oil crops production (FAO 2009). Sesame is a warm-season annual crop that is primarily adapted to areas with long growing seasons and well-drained soils (AGMRC)

COTTON	
VARIABLE	
Length of chain	Cotton often has a very long value chain as the cotton is moved over far distances from farming to ginning and dyeing. The value chain is furthermore divided into specializations such as factories for ginning and dyeing that are distinct from the site of farming, however most parts of the production stays within the country and thus the possibility for adding value and make a posstive impact on the livelihoods of many local farmers are increased.
Potential for scale up, high impact and large scale	Looking at statistical sources, it is notewophy that there has been no growth in the cotton sector since 2007 (Index Mundi). This could just be an indicator of a standstill before it takes off in growth, as the textile industry in Myanmar are expected to expand radiply in the coming years. Thus, there is potential for high impact of a sector possibly about to expand on a large scale and impact the working conditions and the sustainability of many future jobs and companies.
Income and profitability of farmers and small/medium scale businesses	Need for empowerment and capacitybuilding processes of small scale farmers in order to increase income and profitablity for them.
Constraints and possible market triggers/drivers	A constraint to the sector could be the current standard of the production technology as the cotton ginning, delinking and bailing factories. A modernization and renovation is desperately needed for the sector to grow and compete with external markets. Another significant constraint is the poor state of infrastructure, herein bad and few larger roads alongside poor railway connections. The lifting of the US and EU bans on Myanmar is a market trigger for the cotton industry.
Competitiveness	In order to compete at both regional and international levels, the standard of machineries and technologies needs to be improved. Alongside the state of machineries, a critical aspect regarding the competitiveness of the sector is the inconsistent state of electricity and the necessity of using expensive self-stored diesel to keep up production.

“Locked” sectors, powerful stakeholders and variation in sector	The cotton industry has up untill recent years (2004?) been owned and controlled by the state through state-owned organisations and companies and the farmers have been subjected to a compulsory procurement of cotton by Myanmar Cotton & Sericulture Enterprise. Cotton mills were until 2004 owned by MCSE and are now rented out to the private sector on a very low level. In an attempt to promote foreign investment and increase the incountry production the sector has now been liberalized, however, there is an uncertainty of if the quota laid upon farmers have been totally eridicated or if there still are some restriction regarding trade. Thus the sector does not appear to be completely open to growth, free trade and sustainable initiatives from third parties, though the possibility is there in the future.
Labour & other social variables	Cotton is a very labour intensive crop in the production as the land planting, weeding and thinning, irrigation and picking, which is one of the reasons why the sector is expected to grow in Myanmar with its low wages. There is indications of a high level of informal labour in the sector, as day to day wages and payment on piece rate during picking. These types of labour constitutes a high risk in regards to rights and sustainability as the workers in this informal labour system often not are ensured by any labour rights stipulated by the government or organisations.
Absolute volume	The production of cotton increased with annual growth rates between 30 and 55 percent in the period from 2008 to 2011, but decreased to a 2010-level in 2012. Eventhough the expansion of production suffered a setback in 2012, the overall growth rate between 2007-2012 was 109 percent.
Relative volume	The quantitative share in the agricultural sector was in 2007 0,1 percent and peaked in 2011 with 0,25 percent. The share in 2012 after the production decline was down at 0,2 percent.
Land intensity	
Water intensity (cf. WWF "Thirsty Crops")	
Enviromental and climate footprint	

Demand drivers (incl end-use (export or domestic consumption, MNE vs localbrands/ intl vs regional markets))	Most production stays within the country due to governmental ban on export. However, this ban ensures the fulfillment of national demands.
Demand forecast	Slow global demand for textile products, thus a drop in cotton prices in 2012
Supply situation	N/A
Supply forecast	The production of cotton is expected to expand to 1,5 million acres, which is considered a very good prognosis for this crop.
HuRi risk level	
Human development impact (measured by impact on health, education, poverty, food, water, housing, employment)	As it is a very good way for small scale farmers in developing countries to take part of the financial benefits of the global market, there is a high potential for a sustainble initiative in cotton to improve the livelihoods of many people. A noteworphy consequence of the industrialization and modernization of the technology and production of cotton, could be a decrease in jobs availiable for the common people in the agricultural sector. If less hands are needed for production, the scale and speed of impact on human development improvements would decrease as fewer and financially better positioned people would benefit from the profit of a sector in growth and not the poor, less powerful common farmer.

Gender aspects	In general, cotton is often farmed and produced by women, who are not suffiently empowered and influential enough in the market and thus loose potential profit. Issues facing women involved in the production of cotton consists of lack of access to credit, lack of decision-making independence, lack of property entitlement, lack of representation and participation in collective organisation, disproportionate health risks from pesticide use, and lack of coverage by national labour legislation. Specific data on the circumstances in Myanmar are very scarce and it is thus essential to rely on lessons learned from regional/ somewhat similar countries such as for example Pakistan
Vulnerable groups incl indigenous peoples, "ethnic minority crops"	Mainly produced in the central zone, including areas in Mandalay, Bago, Magwe and Sagaing and thus far no indication of being especially produced by vulnerable ethnic groups. However, the crop is mainly produced by small holder farmer and they constitute as such a vulnerable group as they do not entail the same amount of power and voice as larger farms, especially in dealing with land rights, negotiation of market prices and other trades with powerful stakeholders in the sector.
Conflict sensivity and security risk	
Illegal trading	
Political and donor priority (demand aspects covered under "demand drivers and forecast". Focus here is policy trends and governmental law)	In China, import quota on among others cotton. Status on this quota is somewhat unsure. This is highly relevant for the production of cotton as China is one of Myanmars largests export countries and China´s textile industry is still a force to be recogned with. The government welcomes foreign investment to the industry, especially investments aimed a modernizations and renovations.
Perspective of leadership by high end buyers	

Sustainability and responsible business standards and initiatives (see also separate sheet)	Better Cotton Initiative (BCI) - However, not yet active in Myanmar. IAS, the Social Cotton Institute mission is to promote, along with the rural entrepreneurs of the cotton industry of Brazil, legal and technical guidance for the correct implementation of the rural labor laws, work safety standards and protection of the environment, including the encouragement of social actions in the field for the benefit of employees, their families and social communities situated around its properties. The EU pending motion for a resolution on sustainable cotton production.
Lessons to be learned from other countries	Cases of hazardous and exploitative child labour in India, China and Uzbekistan among others and also "hot spot" for suicides due to huge debts of smallholder farmers in India. Cases of bonded labour in agriculture, especially women, children and young students, are seen in Uzbekistan, Tajikistan and Pakistan, but is however hard to document and thus there are very little validated data on the cotton sector, however there is grounds for a legitimate concern about this also happening in the cotton industry (Ergon report).
Existing activities on the issue area	Oxfam is running a project in the Dry Zone to support the development of value chains in the cotton sector, which promotes partnerships between different actors in the market and strengthen the position of small-scale farmers.
Prior body of relevant learning around the commodity	Very insufficient data in cotton research and the form of labour engaged in the production in general, however information in regards to the situation in Myanmar are very scarce. When working with the production of cotton, there is a high risk of exposure to pesticides, as the crop is an easy target for insects pests and the use of pesticides are thus frequent and especially affects the workers who are involved in harvesting.
Logistics	
Security and safety (feasibility of ensuring adequate S&S for field research)	
Crop seasonal cycles	Cotton is grown in three largely overlapped cropping seasons mostly as a rainfed crop. Long staple cotton varieties are grown in late monsoon season from July-August (sowing) to December-January (Picking) and premonsoon season from February-March (sowing) to June-July (picking). Short staple cotton varieties and part of long staple cotton are grown in rainfed monsoon season from May-June (sowing) to November-December (picking).

CORN	
VARIABLES	
Length of chain	Maize crop are produced regularly in Northern Shan State, Mandalay Region and Ayeyawaddy Region. Most of the corn supplies go to commercial mills in Rangoon, Mandalay, and Shan State primarily for feed use in contract farming systems. Additionally, in some hill regions like Chin State and drier parts of the country, corn is used as a staple food and a substitute for rice when it becomes too scarce or expensive. Farmers are usually engaged in contract farming, and under high pressure to avoid crop losses.
Potential for scale up, high impact and large scale	Average yields are likely to increase. This increase is being driven by better seeds, higher demand from domestic and Chinese feed mills, and an increase in contract farming, particularly with CP/Thailand (USDA). There is thus already elements in place for scale up of the sector and a higher positive impact for farmers and small scale businesses.
Income and profitability of farmers and small/medium scale businesses	Whether the use of hybrid seeds are mainly used by larger companies is not clear as there are no specific data on the number of farmers who use hybrid seeds in their production. However according to USDA some farmer has implemented the hybrid seeds in their production, nevertheless it is not possible to make a valid and legit assessment of the effect for the common farmer. According to an assessment by FAO and WTF farmers are currently sowing local maize varieties in up to 18 percent of total maize cultivated areas. Furthermore Shan State (both north and south) and
	Sagaing Division have the highest hybrid maize cultivation among all states/divisions (FAO 2009).
Constraints and possible market triggers/drivers	Yields have increased due to higher use of hybrid seeds, which have been aggressively introduced by private companies such as the Charoen Pokphand Group (CP) from Thailand. Since most of the hybrid corn is grown in rain fed areas with low inputs, corn yields remain lower than the potential yield of 5 MT/HA (USDA). 54 percent of the total maize areas sown used hybrid maize seeds and 28 percent used HYV maize seeds (FAO 2009). Issues with rat infestation are mentioned by several sources to be a considerable constraint to the production and the yields.
Competitiveness	

“Locked” sectors, powerful stakeholders and variation in sector	
Labour & other social variables	Corn production is predominantly dependent on manual labor. Except for land preparation and shelling, the other corn operations such as planting and harvesting are done manually. With the adoption of appropriate mechanization technologies in corn production, better plant growth, increased yield, low operating cost and minimized postharvest losses are expected.
Absolute volume	The production of corn has increased each year from 2007-2012 with annual growth rates between 1,5 and 7 percent. The overall expansion of production from 2007-2012 was 25,5 percent.
Relative volume	The production share of the agricultural sector has steadily increased from 2,5 percent in 2007 to 3 percent in 2012.
Land intensity	
Water intensity (cf. WWF "Thirsty Crops")	
Enviromental and climate footprint	
Demand drivers (incl end-use (export or domestic consumption, MNE vs localbrands/ intl vs regional markets))	Myanmar mainly exports maize to China, with Malaysia and Bangladesh following with not nearly the same amounts.
Demand forecast	

Supply situation	Corn production acreage in Burma continues to increase due to increased demand from domestic and Chinese feed industries.
Supply forecast	The increase in corn production is likely to continue as more farmers profit by growing hybrid corn rather than growing competing crops (USDA).
HuRi risk level	
Human development impact (measured by impact on health, education, poverty, food, water, housing, employment)	
Gender aspects	Considering the fact that farmers usually are engaged in contract farming in the corn production, this affects the division and distribution of labour of women. A report from FAO on womens role in agriculture shows that female farmers are largely excluded from modern contract-farming arrangements because they lack secure control over land, family labour and other resources required to guarantee delivery of a reliable flow of produce. While men control the contracts, however, much of the farm work done on contracted plots is performed by women as family labourers (FAO 2011:13).
Vulnerable groups incl indigenous peoples, "ethnic minority crops"	
Conflict sensivity and security risk	
Illegal trading	

Political and donor priority (demand aspects covered under "demand drivers and forecast". Focus here is policy trends and governmental law)	
Perspective of leadership by high end buyers	C P Company is engaged in the seed production system of Hybrid Corn (ABDI). CP company is involved in many aspects of the trade – it sells hybrid corn to farmers and then buys the milled feed, which is then used as nutrition for its chickens. A partnership or an engagement from this company
	would be obvious and if not crucial for an succesful sustainable approach to the production of corn, as they are such a powerful player in the market.
Sustainability and responsible business standards and initiatives (see also separate sheet)	
Lessons to be learned from other countries	Lessons could be learned from CGIAR´s programs on maize (CGIAR)
Existing activities on the issue area	CABI has initiated a project that aims to improve the livelihoods of smallholder maize farmers around the Mekong, thus including the farmers in China, Lao People Democratic Republic and Myanmar. This project runs from 2012-15 and wishes to promote farmers access to the market.
Prior body of relevant learning around the commodity	Hybrid and ordinary maize should be reported separately owing to widely different yields and uses (KNOEMA).
Logistics	

Security and safety (feasibility of ensuring adequate S&S for field research)	
Crop seasonal cycles	The harvest period of maize in Myanmar is commencing from August/ September and in full swing during October/ November.

HORTICULTURE
VARIABLE

Length of chain	Horticultural cropping systems are intensive in terms of investment, labour requirements and other inputs and are often (but not always) confined to smaller parcels of high quality land. Protected cultivation (e.g., glasshouses or plastic tunnels) and irrigation are common. Accordingly, the products of horticultural enterprise usually have a much higher per unit value than crops grown in less intensive systems. Still, some high value horticultural products are gathered from fields or forests. Wild blueberries and Brazil nuts are two examples (ISHS). In Myanmar, high-value horticulture and fruit crops take place on much smaller plots, than the production of rice or pulses do. Fx Onions, garlic and potato fields average about 1.5 acres each, while vegetables and cut flowers are grown on plots ranging between 0.6 and 0.7 acres in size. High value crops enable even small landholders to earn high returns from small holdings. Horticulture products, including fresh fruits, vegetables and flowers, provide earnings for about 15% of rural households in Myanmar. Grown widely throughout Myanmar, horticultural products assume particular prominence in the hilly zones of Shan State and other border regions. (USAID). The horticultural value chain includes several segments: inputs, production, packing and storage, processing, and distribution and marketing. The chain is buyer-driven; the lead firms are large supermarkets in key markets (World bank). Myanmar is rich in tropical fruit resources such as mango, banana, pine-apple, strawberry, durian, mangosteen, papaya, tamarind, and coconut
Potential for scale up, high impact and large scale	If the government promotes diversification into high-value horticulture it offers prospects for raising returns per acre by a factor of two to ten for both small farmers and landless (USAID).
Income and profitability of farmers and small/medium scale businesses	Horticulture offer rapidly growing, high-value markets. For very small landholders, these high-value commodities offer the attraction of growing markets and limited land requirements (USAID).
Constraints and possible market triggers/drivers	Production of the horticultural crops offers significantly more post-harvest opportunities to add value (World Bank). This feature could be considered a market trigger, as the profit for the farmer is potentially higher than for other commodities and thus the incentive to go into horticultural cultivation is heightened.
Competitiveness	Market access in the value chain is regulated by trade agreements and governments tend to use instruments to protect their domestic fruit and vegetable industries, including seasonal tariffs, tariff escalation, and direct subsidies. These can affect the relative competitiveness of the industry in developing countries as Myanmar and impede upgrading into higher-value activities.
"Locked" sectors, powerful stakeholders and	
variation in sector	

Labour & other social variables	Cultivation of fruits and vegetables is substantially more labor intensive fx than cereal crops.
Absolute volume	The production of horticulture crops has increased each year from 2007-2012 with growth rates between 2-7 percent. The overall expansion of production for this period was 24 percent.
Relative volume	The production of horticulture crops has made up a steady share of the agricultural sector from 2007-2012, with a 16 percent share in 2012.
Land intensity	
Water intensity (cf. WWF "Thirsty Crops")	
Enviromental and climate footprint	
Demand drivers (incl end-use (export or domestic consumption, MNE vs localbrands/ intl vs regional markets))	
Demand forecast	
Supply situation	
Supply forecast	
HuRi risk level	

Human development impact (measured by impact on health, education, poverty, food, water, housing, employment)	Indications of misuse of pesticides in the horticultural sector. Sources says that the exact impact of uncontrolled pesticide use and other unacceptable practices on fruits and vegetables is almost impossible to quantify. However, several of the pesticides that are being used are known to pose long-term risks to human health. Report from 2006 claims that farmers continues to misuse pesticides and use banned pesticides reportedly smuggled in from neighbouring countries despite laws banning these practices (26). The Government lacks the resources necessary to control this and the misuse of pesticides thus have a direct impact on the health of both consumers and producers. It is uncertain how much this practise has changed to this date, as information is scarce.
Gender aspects	The increase of nontraditional agriculture, such as horticultural, has resulted in the emergence of "modern" agricultural waged labor where women are overwhelmingly the preferred source of labor (World Bank). In general, men are favored for positions that require physical strength. Women are preferred for jobs that depend on finesse, dexterity, and attention to detail. Horticultural crops are, as mentioned above, mainly cultivated on smaller plots and by smallholders. This constitutes a risk for the women involved in the sector, as there is a tendency or high likehood of not recognizing the work women do in these kinds of cultivation. Often the women are not paid and their work as such is not reckognized, as women constitutes a large share of unpaid family labour in this sector.
Vulnerable groups incl indigenous peoples, "ethnic minority crops"	High value horticulture products attracts considerable interest among landless and near landless households because of their high value and low land requirements (USAID). This agricultural sector thus provides a means for a generally vulnerable group to earn a living in an otherwise hard environment as landless.
Conflict sensivity and security risk	
Illegal trading	
Political and donor priority (demand aspects covered under "demand drivers and forecast". Focus here is policy trends and governmental law)	The government has stressed the extended production of high-yield fruits and vegetables to boost export by taking advantage of the climatic conditions and geographic superiority.

Perspective of leadership by high end buyers	
Sustainability and responsible business standards and initiatives (see also separate sheet)	
Lessons to be learned from other countries	
Existing activities on the issue area	
Prior body of relevant learning around the commodity	
Logistics	
Security and safety (feasibility of ensuring adequate S&S for field research)	
Crop seasonal cycles	

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