Netherlands Enterprise Agency

Myanmar Flower Sector Quick Scan

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MYANMAR FLOWER SECTOR QUICK SCAN

SECTOR REPORT

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MYANMAR FLOWER SECTOR QUICK SCAN

'sustainable sector professionalisation through partnership'

Word in Front

This report describes the Myanmar (cut)flower sector, its potential, challenges, and opportunities it brings forth in its development and professionalisation foreseen in the next years ahead.

The Dutch floricultural sector is known worldwide for its sheer size, advanced technological production and trade infrastructure, profound knowledge, product quality and efficiency.

Through commitment and in the spirit of cooperation, the Dutch floricultural sector is encouraged to seize the opportunities the Myanmar flower sector has to offer to professionalise in a sustainable manner.

With this report, the Agricultural Department of the Netherlands Embassy in Yangon, Myanmar, seeks to promote the cooperation between The Netherlands and Myanmar in the fields of capacity building, production and post-harvest development, trade of plant material, bulbs and technologies and investments in joint operations.

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If you wish to have any further clarification or support on this matter, please do not hesitate to contact ir. Frederik Heijink, Agricultural Counsellor of the Netherlands Embassy in Myanmar.

Executive summary

purpose. This report is written from two perspectives, i.e. (i) Dutch – to provide to-the-point details for Dutch agribusiness to elevate Myanmar flower sector through investments and/or export of plant material, knowledge and technology, and (ii) Myanmar - to provide further insight and food for directed interventions to both Myanmar relevant supervisory, facilitating and regulatory bodies and key chain actors.

background. Myanmar is a new democracy, formerly known as 'Burma'. The country is bordered by India and Bangladesh to its West, Thailand and Laos to its East and China to its North and Northeast. Its flower market is impressive because of its sheer size and potential. A population of 55 million with a deeply founded love and appreciation for flowers and its largely Buddhist society, which dictates several flower offerings to Buddha per day, make for a significant daily demand of fresh cut flowers. Fresh flowers are used in high-end hotels and restaurants, and for different occasions, like weddings, exhibitions and conferences, funerals, birthdays, and as corporate gifts or just as token of love or appreciation. Also bedding plants and other ornamentals for home gardens are cherished, be it in the cities or in rural areas.

The central zone of the country is most of interest to the floricultural sector. The flori-commercial centre of Myanmar is found in former capital city Yangon with a population of 7 million. From a production perspective, other than the surrounding areas around Yangon, Mandalay region and Shan State are important. Specific mention needs to be made to Pyin Oo Lwin, labelled as the country's flower city, in Mandalay region.

Floriculture in Myanmar has an enormous potential to develop into a key agricultural sector in Myanmar. Yet, however important this sector is or can become, it is still undervalued as an agricultural sub-sector.

The three main types of cut flowers produced in Myanmar are Chrysanthemum, which are estimated to be 60-70% of the total acreage, followed by Rose and Gladiolus. Other flowers are Aster and orchids (mainly Dendrobium).

flower production. Growers are in general small farmers with a few thousand square meters of production area. They have access to limited resources, including financial assistance, and operate with little or no technology. Cultivation is mostly open field without any post-harvest facilities. There is a general across-the-border lack of knowledge in terms of production planning, seeds and planting material, cultivation techniques, input supplies, product handling, integrated pest management (IPM), post-harvest and marketing. Plant material and bulbs are replanted on-farm, resulting in loss of quality, old varieties prone to diseases, little variety in type, colour and shape, and in general low and non-uniform yields. Flowers are mainly sold via intermediaries, namely the regional trader and from there on the wholesale market trader. Growers are highly dependent on these intermediaries, who oftentimes also supply agro-inputs such as agro-chemicals and fertilizers, and loans with high interest rates of up to 120%-240% per year. This puts the majority of growers in a vulnerable and dependent position. There is a craving for knowledge on all areas of production, marketing and farm management.

The wholesale market in Myanmar plays a vital role in the flower supply chain. By far the biggest and most important wholesale market ('WSM') for cut flowers is the Thiri Mingalar WSM. There are no cold store facilities throughout the chain.

Up till 80-90% of purchased flowers are used for religious purposes. Nearly every home has one to as many as fifteen flower vases, which flowers are changed once or twice a week. The trend of using fresh flowers for events and weddings is gaining popularity and the amount spent depends on the spending power, yet can be excessively large.

There are a few agriculture banks, both state owned and private. These banks have some SME loan products for farmers' cooperatives. However, in general, financial institutions, when granting credits to the horticultural sectors, only provide funding for vegetables and fruit projects. Banks in general are not interested in the flower sector, mainly due to unawareness.

Myanmar floricultural sector main challenges to overcome are: illegal border trade, quality of product, process and management, and the structural lack of information and required knowledge. The most disrupting issue is the illegal border trade from China.

Myanmar is investing in the development and professionalisation of its seed sector with the support of the Netherlands. This will include floriculture. To date, Myanmar is not a member of UPOV 91 (International Union for the Protection of New Varieties of Plants). The country has however initiated the procedure for acceding to the UPOV Convention.

needs. The sector, though high in potential, is underperforming; There is a direct need for (i) institutional capacity building, (ii) sector data, (iii) organisation of growers, (iv) practical knowledge on production and post-harvest, (v) a lack of quality and variety planting material (bulbs, seeds, cuttings), and (vi) (low-mid) cultivation and cooling/cold storage technology.

opportunities. The main opportunities for Dutch companies aiming to conduct or expand their business with Myanmar are found in the export of '<u>hardware</u>', namely: (a) Quality bulbs, seeds and cuttings, (b) Introduction of 'new' varieties cut flowers and bedding plants, (c) Low- and mid-tech greenhouses and shading structures, (d) Farm equipment, agro-inputs/IPM, materials and machinery, (e) Any low cost irrigation and water saving tools, (f) Cold storage solutions, (g) Reefers and cooled transport equipment, and (h) Mobile technology / application development. In addition, opportunities are found in the export of '<u>software</u>' in the form of: (i) Organisation of growers, cooperative development, (j) Training of growers on all fields, (k) Institutional strengthening, capacity building, training of trainers/extensionists, officers, staff of government, educational and research institutes, and (l) Market research, data collection, floricultural statistics. For early entrants aiming for a long-term presence in the market, setting up joint operations in Myanmar flower sector, especially in production, would also offer enormous potential.

cooperative spirit. Myanmar floricultural sector has its fair share of challenges and issues to bridge the gap from a traditional flower sector to a market driven professional value chain. The potential is enormous, and once awareness is there, willingness to act will follow. Given, is that a broad support structure has to be in place to overcome the lack of information, knowledge and cooperation. The Netherlands is like no other country used to and capable of entering into a long term strategic cooperation with Myanmar to assist in elevating the sector.

မြန်မာ့ပန်းဈေးကွက်လေ့လာမှုစီမံကိန်းအဓိကအချက်များ

ရည်ရွယ်ချက်။ ။ စီမံကိန်းကို အဓိကအားဖြင့် အချက်နှစ်ချက်ဖြင့် ပြုလုပ်ခဲ့ပါသည်။

၁။ နယ်သာလန်နိုင်ငံအတွက် မြန်မာ့ပန်းဈေးကွက်နှင့်ဆက်စပ်သော ရင်းနှီးမြှုပ်နှံမှုများ၊ နည်းပညာများ၊ အသိပညာအတတ်ပညာများနှင့် ပန်းစိုက်ပျိုးရေးနှင့်ဆက်စပ်ပစ္စည်းများအားရောင်းချနိုင်စေရန်

၂။ မြန်မာဘက်ခြမ်းအနေဖြင့်လည်း ဈေးကွက်တွင်းအဓိကရှိနေသူများ၊ သက်ဆိုင်ရာလူကြီးမင်းများ အစိုးရပိုင်းနှင့်ပြည်သူများ ပူးပေါင်းဆောင်ရွက်ပြီး မြန်မာပန်းဈေးကွက် ပြောင်းလဲတိုးတက်လာစေရန် ရည်ရွယ်ပါသည်။

နောက်ခံသမိုင်း

မြန်မာနိုင်ငံသည် ဒီမိုကရေစီနိုင်ငံသစ်ဖြစ်ပြီး ယခင်က ဘားမားအနေဖြင့် လူသိများခဲ့သည့်နိုင်ငံ ဖြစ်ပါသည်။ မြန်မာနိုင်ငံသည် အနောက်ဖက်တွင် အိန္ဒိယ နှင့် ဘင်္ဂလားဒေ့ရှ်နိုင်ငံ၊ အရှေ့ဘက်တွင် ထိုင်းနှင့် လာအိုနိုင်ငံ၊ အရှေ့မြောက်နှင့် မြောက်တွင် တရုတ်နိုင်ငံတို့နှင့်နယ်နိမိတ်ချင်း ထိစပ်လျက်ရှိပါသည်။ နိုင်ငံတွင်းပန်းဈေးကွက်၏ ကြီးမားမှုနှင့် အလားအလာရှိမှုတို့သည် အထင်ကြီးလေးစားဖွယ်အခြေအနေတွင်ရှိပါသည်။ လူဦးရေ စုစုပေါင်း ၅၅သန်းခန့်ရှိပြီး ဗုဒ္ဓဘာသာဝင်အများစုအနေဖြင့် နေ့စဉ်ဘုရားအား ပန်းကပ်သည့်အလေ့အထရှိသည့် နိုင်ငံဖြစ်သည့်အားလျော်စွာ ဖြတ်ပန်းများအသုံးပြုမှု သိသိသာသာ မြင့်မားသည့်နိုင်ငံလည်းဖြစ်ပါသည်။ လတ်ဆတ်သော ဖြတ်ပန်းများကို အဆင့်မြင့်ဟိုတယ်ကြီးများ စားသောက်ဆိုင်များအပြင် အခြားသော ပွဲအမျိုးမျိုးဖြစ်သည့် မင်္ဂလာလက်ထပ်ပွဲများ၊ အစည်းအဝေးများ၊ အခမ်းအနားများ၊ အသုဘအခမ်းအနားများ၊ မွေးနေ့ပွဲများနှင့် လက်ဆောင်ပေးရန်များအဖြစ် အသုံးပြုကြပါသည်။ မြို့ပြတွင်မူ အခြားသော ဥယျာဉ်အလှဆင်အပင်များအသုံးပြုမှုလည်းရှိပါသည်။

ပန်းဈေးကွက်အတွက် စိတ်ဝင်စားစရာအကောင်းဆုံးနေရာသည် မြန်မာပြည်၏အချက်အချာကျသော ယခင်မြို့တော်ဖြစ်ခဲ့သည့် လူဦးရေ ၇သန်းခန့်ရှိသည့် ရန်ကုန်မြို့ဖြစ်ပါသည်။ စိုက်ပျိုးထုတ်လုပ်သည့်ဧရိယာအနေဖြင့် ရန်ကုန်အနီးတဝိုက်ဒေသများအပြင် မန္တလေးနှင့် ရှမ်းပြည်နယ်တို့သည်လည်း အရေးပါသည့်ဒေသများဖြစ်ကြပါသည်။ မန္တလေးဟုဆိုရာတွင် သေချာတိကျစွာပြောမည်ဆိုပါက ပန်းမြို့တော်ဟု တင်စားခေါ်ဝေါ်သည့် ပြင်ဦးလွင်ကို ရည်ညွှန်းပါသည်။

ပန်းစိုက်ပျိုးရေးသည် မြန်မာနိုင်ငံအတွက် အရေးပါသော အလားအလာရှိသည့် အခြေအနေတခုအဖြစ်ရှိပါသည်။ သို့သော်လည်း ယခုအချိန်တိုင်အောင် ပန်းစိုက်ပျိုးရေးကို ပုံမှန်စိုက်ပျိုးရေး၏ အစွယ်အပွားတခုအဖြစ်သာ သတ်မှတ်ထားဆဲဖြစ်သည်ကိုတွေ့ရပါသည်။

မြန်မာပြည်တွင်းတွင် အဓိကစိုက်ပျိုးထုတ်လုပ်လျက်ရှိသော ပန်းအမျိုးအစားသုံးမျိုးရှိပြီး ဈေးကွက်ဝေစုအများစုမှာ ဂန္ဓမာပန်းဖြစ်ပါသည်။ စိုက်ပျိုးထုတ်လုပ်မှုအားလုံး၏ ၆၀-၇၀% ထိရှိပြီး

နှင်းဆီနှင့် သစ္စာပန်းသည် ၄င်းနောက်မှလိုက်လျက်ရှိပါသည်။ အခြားသော ပန်းမျိုးများအနေဖြင့် မေမြို့ပန်း နှင့် သစ်ခွပန်းများအပြင် ရာသီအလိုက်ပွင့်သော မြန်မာမျိုးရင်းအချို့လည်းရှိကြပါသည်။

ပန်းစိုက်ပျိုးသူအများစုသည် အသေးစားစိုက်ပျိုးသူများဖြစ်ပြီး ပန်းစိုက်ဧက အနည်းငယ်သာရှိလေ့ ရှိကြပါသည်။ ပန်းစိုက်သူအများစုသည် ငွေကြေးမှစပြီး အခြားသောအရင်းအမြစ်များဖြစ်သည့် ဆေးသုံးစွဲမှုအထိ ခက်ခဲမှုများရှိနေကြပြီး နည်းပညာအလွန်တရာအားနည်းကြပါသည်။ အများအားဖြင့် ကွင်းပြင်ထဲတွင်သာစိုက်ပျိုးကြပြီး ရိတ်သိမ်းချိန်လွန်နည်းပညာများလည်း မရှိကြသည်ကို တွေ့ရပါသည်။ ခြုံငုံကြည့်လျှင် စိုက်ပျိုးထုတ်လုပ်ရန် စီမံကိန်းဆွဲသည်မှအစပြုပြီး မျိုးစေ့များနှင့် စိုက်ပျိုးထုတ်လုပ်ရာတွင် အသုံးပြုသည့် ကိရိယာများမရှိခြင်း၊ စိုက်ပျိုးနည်းများမရှိခြင်း၊ စိုက်ပျိုးရေးတွင် အသုံးပြုသည့် မြေဩဇာ ပိုးသတ်ဆေးမှအစပြုသည့်သည့် နည်းပညာများအပြင် ရိတ်သိမ်းချိန်လွန် နည်းပညာနှင့် ဈေးကွက်ထိုးဖောက်မှု စံနှစ်များမှာ အလွန်တရာ အားနည်းလျက်ရှိသည်ကို တွေ့ရပါသည်။ စိုက်ပျိုးထုတ်လုပ်သည့်နေရာတွင် အသုံးပြုသည့် မျိုးစေ့များကိုလည်း ထပ်ခါထပ်ခါအသုံးပြုခြင်းဖြင့် ပန်းအရည်အသွေးများကျခြင်း၊ ရောဂါပိုးမွှားဒဏ်ခံနိုင်ရည်အားနည်းလာခြင်း၊ ပန်းအမျိုးအမည်၊ အရောင်အသွေး ရှားပါးခြင်း၊ အကြမ်းဖျင်းအားဖြင့် ထုတ်လုပ်မှုနှုန်းနည်းပါးကျဆင်းခြင်းများကိုတွေ့ရလေ့ ရှိပါသည်။

ပန်းများကို ပုံမှန်အားဖြင့် ကိုယ်တိုင်ရောင်းချလေ့မရှိပဲ ပွဲစားများမှတဆင့်ရောင်းချလေ့ရှိပါသည်။ ဒေသတွင်းပွဲစား (ပုံမှန်အခေါ် တောပွဲစား) နှင့် ကုန်စည်လက်ကားရောင်းဝယ်သည့်ဒိုင်တွင်ရှိသော ပွဲစား (မြို့ပွဲစား) အဆင့်ဆင့်ခံရောင်းချသောဓလေ့ရှိပါသည်။ စိုက်ပျိုးထုတ်လုပ်သူများသည် ထိုသို့သော ကြားခံများပေါ်တွင် အလုံးစုံမှီခိုနေရပြီး ရံဖန်ရံခါ ထိုပွဲစားများမှပင် စိုက်စားရိတ်များ စိုက်ပျိုးရာတွင်လိုအပ်သော မြေဩဇာများ၊ ပိုးသတ်ဆေးများအား အတိုးနှုန်းကြီးစွာဖြင့် ထုတ်ချေးပေးလေ့ရှိပြီး တလ၅ကျပ်တိုး ၊၁၀တိုး၊ အခါအားလျော်စွာ ၂၀တိုးများထိ ပေးရသည်ကို လည်းတွေ့ရပါသည်။

လက်ကားရောင်းချသည့်ဒိုင်များမှာ ပန်းနှင့်ပတ်သက်သော ကုန်စည်စီးဆင်းမှုလမ်းကြောင်းတွင် အရေးပါသော ထောင့်တနေရာမှပါဝင်လျက်ရှိပြီး အဓိကအားဖြင့် သီရိမင်္ဂလာဈေးသည် အကြီးမားဆုံးနှင့် အရေးပါဆုံးဖြစ်နေပေသည်။ ပန်းအတွက် လက်ရှိအနေအထားအနေဖြင့် အအေးခန်းများ အသုံးပြုသည့်အလေ့အထမရှိသေးပါ။

ပန်းဝယ်ယူမှုများ၏ ၈၀မှ ၉၀ရာနှုန်းအထိသည် ဘာသာရေးအတွက်အသုံးပြုခြင်းအများစုဖြစ်ပါသည်။ အိမ်တအိမ်တွင် အနည်းဆုံးပန်းတအိုးမှ အချို့သည်၁၅အိုးခန့်ထိအသုံးပြုကြပြီး အနိမ့်ဆုံး တပတ်တကြိမ် နှစ်ကြိမ် ပန်းပေါ်မူတည်လဲကြရပါသည်။ အခြားသောပွဲများနှင့် မင်္ဂလာဆောင်များအတွက်ပန်း အသုံးပြုမှုမှာလည်း တိုးတက်လျက်ရှိပြီး ငွေကြေးအကုန်အကျခံနိုင်မှုပေါ်မူတည် နိုင်ငံခြားမှ မှာယူသုံးစွဲသည်ထိရှိကြပါသည်။

နိုင်ငံတော်အစိုးရပိုင်နှင့် ပုဂ္ဂလိကပိုင် စိုက်ပျိုးရေးချေးငွေထုတ်ချေးပေးသောဘဏ်များ အများအပြားရှိပြီး ယင်းဘဏ်များတွင် စွန့်ဦးတီထွင် တောင်သူအစုအဖွဲ့များအတွက် ချေးငွေများထုတ်ချေးပေးလျက်ရှိပါသည်။

သို့ရာတွင် ယေဘူယျအားဖြင့် ငွေကြေးထောက်ပံ့ပေးသော အဖွဲ့အစည်းများသည် စိုက်ပျိုးရေးချေးငွေများထုတ်ချေးသည့်အခါ ဟင်းသီးဟင်းရွက်နှင့် သစ်သီးဝလံများအတွက်သာ အာရုံစိုက်ထောက်ပံ့ပေးပါသည်။ ပန်းစိုက်ပျိုးရေးနှင့်ပတ်သက်ပြီး စိုက်ပျိုးချေးငွေထုတ်ချေးခြင်းမရှိကြချေ။ မြန်မာ့ပန်းဈေးကွက်နှင့် ပတ်သက်၍ အဓိကကြုံတွေ့နေရသောအခက်အခဲများမှာ တရားမဝင်နယ်စပ်ကုန်သွယ်ရေး၊ မျိုးစေ့အပါအဝင်ဆက်စပ်ပစ္စည်းများ၏ အရည်အသွေးမပြည့်ဝမှု၊ ထုတ်လုပ်ဖြန့်ဖြူးမှုပိုင်းနှင့် စီမံခန့်ခွဲမှု အားနည်းခြင်း၊ သတင်းအချက်အလက်များနည်းပါးခြင်း နှင့် လိုအပ်သော အသိပညာဗဟုသုတမရှိခြင်းတို့ ဖြစ်ကြပါသည်။ အဆိုးဆုံးကြုံနေရသော အခက်အခဲမှာတရုတ်ပြည်မှ တရားမဝင် နယ်စပ်ဖြတ်ကျော် ကုန်သွယ်မှုများဖြစ်ပေသည်။

မြန်မာနိုင်ငံသည် နယ်သာလန်နိုင်ငံ၏ ကူညီထောက်ပံ့မှုဖြင့် မျိုးစေ့ကဏ္ဍဆိုင်ရာ ဖွံ့ဖြိုးတက်မှုများနှင့် သက်ဆိုင်ရာနယ်ပယ်၏ ကျွမ်းကျင်မှုပိုင်းဆိုင်ရာ ဖွံ့ဖြိုးတိုးတက်ရေးအတွက် ရင်းနှီးမြှုပ်နှံမှုများ ဆောင်ရွက်လျက်ရှိပါသည်။ ထိုမျိုးစေ့ကဏ္ဍဆိုင်ရာ ဖွံ့ဖြိုးတိုးတက်မှုထဲတွင် ပန်းမျိုးစေ့များ ပန်းနှင့်သက်ဆိုင်သော အခြေခံများလည်း ကဏ္ဍတခုအဖြစ်ပါဝင်ပါသည်။ လက်ရှိအခြေအနေတွင် မြန်မာနိုင်ငံသည် UPOV 91 (International Union for the Protection of New Varieties of Plants) အဖွဲ့ဝင်နိုင်ငံထဲတွင် မပါဝင်ပါ။ UPOV 91 သည် နိုင်ငံတကာဆိုင်ရာ အပင်မျိုးစိတ်များ မျိုးစိတ်သစ်များ ကာကွယ်ရေး အဖွဲ့အစည်းဖြစ်ပြီး ယခုအခါမြန်မာနိုင်ငံသည်အဖွဲ့ဝင်နိုင်ငံဖြစ်နိုင်ရေးအတွက် ကြိုးပမ်းဆောင်ရွက်နေလျက်ရှိပါသည်။

လိုအပ်ချက်များ

အလားအလာကောင်းများရှိနေသော်လည်း ပန်းစိုက်ပျိုးရေးကဏ္ဍသည် မြန်မာ့စိုက်ပျိုးရေးတွင် မှေးမှိန်လျက်ရှိပါသည်။ အဓိကလိုအပ်ချက်အနေဖြင့် ပန်းဈေးကွက်နှင့် ပန်းစိုက်ပျိုးရေးဆိုင်ရာ သတင်းအချက်အလက်များမရှိခြင်း၊ ပန်းစိုက်တောင်သူအစုအဖွဲ့မရှိခြင်း ရှိလျှင်အားနည်းခြင်း၊ စိုက်ပျိုးထုတ်လုပ်ခြင်းနှင့် ရိတ်သိမ်းချိန်လွန်နည်းပညာများ မရှိခြင်း၊ စိုက်ပျိုးထုတ်လုပ်ရာတွင် အရေးပါသော မျိုးကောင်းမျိုးသန့်မျိုးစေ့များမရှိခြင်းနှင့် အအေးခန်းထားသိုမှုနည်းစံနစ်များမရှိခြင်း တို့လည်းတွေ့ကြုံနေရပါသည်။

အခွင့်အလမ်းများ

မြန်မာပြည်တွင်းသို့ ရင်းနှီးမြှုပ်နှံမှုများပြုလုပ်မည့် ဒပ်ချ်ကုမ္ပဏီများအတွက် အခွင့်အရေးကောင်းများအနေဖြင့် အရည်အသွေးပြည့် မျိုးစေ့များသွင်းနိုင်၊ ရောင်းချနိုင်ခြင်း၊ ဖြတ်ပန်းအမျိုးအမည်အသစ်များ နှင့် အခြားသောအပင်မျိုးသစ်များတင်သွင်းနိုင်ခြင်း၊ အနိမ့်ဆုံးနှင့် အလယ်အလတ်နည်းပညာနှင့် ဆောက်လုပ်ထားသော ဖန်လုံအိမ်များ နှင့်

အရိပ်ပေးစံနစ်များတင်သွင်းရောင်းချနိုင်ခြင်း၊ လယ်ယာစိုက်ပျိုးရေး ဆက်စပ်ပစ္စည်းများ စိုက်ပျိုးရေးတွင် ထည့်သွင်းအသုံးပြုရသော သွင်းအားစုများ၊ စက်မှုလယ်ယာဆက်စပ်ပစ္စည်းများလည်း တင်သွင်းရောင်းချနိုင်သည့်အပြင်၊ ဈေးသက်သာသော ရေသွင်းစံနစ်များနှင့် ရေချွေတာနိုင်မည့် ကိရိယာများ၊ အအေးခန်းစံနစ်များ၊ အအေးခန်းကွန်တိန်နာများ၊ မိုဘိုင်းဖုန်းနှင့်ဆက်စပ်သုံးစွဲနိုင်သော နည်းပညာများဖြင့် လယ်ယာကဏ္ဍတိုးတက်ဖွင့်ဖြိုးရေးတွင် ပါဝင်ဆောင်ရွက်နိုင်ပါသည်။

ထို့အပြင် အခြားသောအခွင့်အလမ်းများအနေဖြင့် ပန်းစိုက်တောင်သူအစုအဖွဲ့များဖွဲ့စည်းခြင်းနှင့် ထိုအဖွဲ့များတိုးတက်အောင်ဆောင်ရွက်ပေးခြင်း၊ ပန်းစိုက်တောင်သူများအားသင်တန်းများပို့ချခြင်း၊ အစိုးရပိုင်းဝန်ထမ်းများအားလည်း သက်ဆိုင်ရာနည်းပညာများအတွက် ပို့ချပေးခြင်း၊ သုတေသနနှင့် ပညာရေးဆိုင်ရာ အရည်သွေးမြှင့်တင်ပေးခြင်း၊ ဈေးကွက်သုတေသနများ၊ အချက်အလက်များ စုဆောင်းကောက်ခံခြင်းများ၊ နှင့် ကိန်းဂဏန်းအချက်အလက်အတိအကျများ ရရှိအောင် ဆောင်ရွက်ပေးရာတွင် နည်းစံနစ်မှန်ကန်စေရန် ပံ့ပိုးကူညီပေးနိုင်ပါသည်။ အခြားကြီးမားသော အခွင့်အလမ်းတခုမှာ ပန်းဈေးကွက်တွင်းရေရှည်တည်တံ့စေရန်ရည်ရွယ်ထိုးဖောက်လိုသူ ပထမဆုံးဝင်ရောက်လာမည့်သူများအနေဖြင့်လည်း မြန်မာကုမ္ပဏီများဖြင့်ပူးပေါင်း၍ စိုက်ပျိုးထုတ်လုပ်မှု ဆောင်ရွက်နိုင်ပါက ရေရှည်အကျိုးဖြစ်ထွန်းနိုင်မည်ဖြစ်သည်။

<u>ပေါင်းစပ်လုပ်ဆောင်နိုင်မှုစွမ်းအားများ</u>

မြန်မာပန်းဈေးကွက်အနေဖြင့် လက်ရှိယခင်ထုံးစံများအတိုင်းသွားနေသောစံနစ်နှင့် ဈေးကွက်ဖိအားကြောင့် ပြောင်းလဲသင့်သည်များကို တီထွင်ပြောင်းလဲရမည့် စံနစ်ကိုသွားရာတွင် သင့်တင့်သောစိန်ခေါ်မှုများကိုလည်း မေ့လျော့၍မရနိုင်ပေ။ အခွင့်အလမ်းနှင့်ဖြစ်နိုင်ချေ အလွန်တရာကြီးမားသည့်အပြင် ပြောင်းလဲသင့်သည်ဟု နားလည်မှုရှိလာပါက ပြောင်းလဲရန်ဆန္ဒ ရှိလာနိုင်သည်။ သို့သော်အထက်တွင်ပြောထားသကဲ့သို့ သက်ဆိုင်ရာသတင်းအချက်အလက်များမရှိခြင်း၊ နည်းပညာအားနည်းခြင်းနှင့် စုပေါင်းလုပ်ဆောင်နိုင်မှုအားနည်းခြင်းများလည်း အမှန်တကယ်ရှိပါသည်။ အခြားသောတိုင်းပြည်များနှင့် မတူညီပဲ နယ်သာလန်သည် ပန်းနှင့်ပတ်သက်သော ကဏ္ဍတိုးတက်စေရန် နည်းဗျူဟာချမှတ်လုပ်ဆောင်ရာတွင် အကောင်းဆုံးပူးပေါင်းဆောင်ရွက်နိုင်မည့်နိုင်ငံဖြစ်နိုင်သည်ဟု ယုံကြည်ပါသည်။

Table of Contents

1 Introduction

1.1 Study background and approach

The floricultural sector quick scan underlying this report was structured around a dual-purpose approach:

- Netherlands oriented perspective - provide to-the-point details for Dutch agribusiness to elevate Myanmar flower sector through investments and/or export of plant material, knowledge and technology, and
- Myanmar oriented perspective - provide further insight and food for directed interventions to both Myanmar relevant supervisory, facilitating and regulatory bodies and key chain actors.

For you, as reader, this report seeks to provide answers to following questions:

- What are the basic characteristics of the Myanmar flower sector and what are the main products?
- What is the environmental context in which the Myanmar flower sector is embedded (demographic, economic, social-cultural, technological, ecological and legal-fiscal-political setting)?
- What is the structure of the flower sector, who are the main actors, facilitators and influencers and what are the linkages?
- How advanced or traditional is the sector and where are differences and why?
- What are the main issues, trends and developments?
- How, and in which specific areas, can Dutch agribusiness support the further (sustainable and social responsible) development of the sector in the areas of knowledge, trade (e.g. agro-inputs) and/or technology?
- What are potential risks and considerations Dutch agribusiness should be aware of?

Scope and disclaimer. The scope of the study focussed predominantly on cut flower production in Myanmar, partially on cultivated greens and little on bedding plants. This report does not address potted house plants or ornamental palms for e.g. export to EU. The primary focus was to identify challenges in Myanmar cut flower sector, and translate those into technology, product and services interventions whereby The Netherlands as global horticultural centre of expertise can assist Myanmar in its sector development efforts.

To date Myanmar government does not maintain floricultural sector statistical data. Quantitative indicators are either outdated or just not available. As such, this report contains mainly qualitative information to sketch the floricultural landscape of Myanmar and the observed linkages, challenges, trends and opportunities for professionalisation.

1.2 General introduction Myanmar

Myanmar is in the midst of a dramatic political and economic transition. Having moved from military rule to democracy, and from a centrally directed economy to one that is market-oriented, the country is now on a path to a more prosperous future. The World Bank expects

Myanmar to be one of the world's fastest growing economies, with an average growth rate of 7.1% over the next three years[1].

Basic facts. Myanmar, before also known as 'Burma', is a former British colony located in Southeast Asia. Myanmar is bordered by India and Bangladesh to its West, Thailand and Laos to its East and China to its North and Northeast. The land area covers some 676,578 km^2. This is approximately 16 times larger than The Netherlands. Myanmar population exceeds 55 million. Its capital city is Nay Pyi Taw, and its largest city and former capital is Yangon (Rangoon). Yangon is also the major port city. Time difference between Myanmar and The Netherlands is 4.5 hours (during winter time 5.5 hours). The local currency is Myanmar Kyat, abbreviated as MMK or Ks, currently 1 Euro = 1600 Kyat (November 2017). National minimum wage is 3,600 Kyat/day (approx. EUR 2.25), the lowest of all South East Asian countries[2]. Urban-rural distribution is 30%-70%.

Administrative divisions. Myanmar is divided into seven states and seven regions (formerly called divisions). Regions are mainly inhabited by the dominant ethnic group. States, in essence, are regions that are home to particular ethnic minorities. The administrative divisions are further subdivided into districts, which are further subdivided into townships, wards, and villages. With respect to the floricultural sector, in this report, Yangon region, Mandalay region and Shan State are most relevant (see also figure 1.).

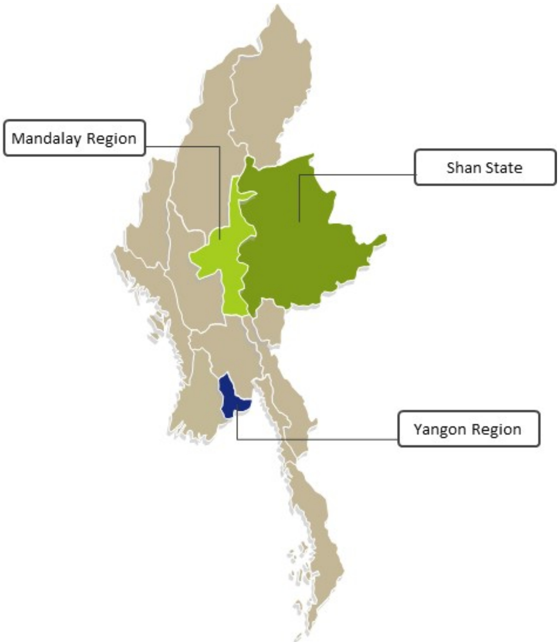

Figure 1.: Myanmar basic map

Government. Myanmar is a brand-new democracy. Its first credibly elected civilian government, after more than five decades of military dictatorship, was sworn into office on 30 March 2016. Since then, the incumbent president is Htin Kyaw. While he is the de jure head of state and the government, the de facto head of government and the dominant state figure is the State Counsellor of Myanmar and leader of the ruling National League for Democracy party, Aung San Suu Kyi. Nobel prize winner Aung San Suu Kyi, also referred to as 'The Lady' is adored by the majority of the Burmese population. The government is vested in the new capital Nay Pyi Taw (NPT). This includes the for floriculture relevant Ministry of Agriculture, Livestock and Irrigation (MoALI).

Climate zones. Myanmar has a largely tropical climate with three seasons: the monsoon or rainy season, from May to October; the cool season, from November to February; and the hot season, generally from March to April. Rainfall during the monsoon season totals more than 500 cm in upper Myanmar and over 250 cm in lower Myanmar and Yangon. Central Myanmar, called the dry zone ('CDZ'), and Mandalay, the chief city in the area, each receive about 76 cm per annum. The mean annual temperature is 27° C; average daily temperatures in Yangon range from 18° to 32° C in January, during the cool season, and from 24° to 36° C in April, during the

[1] PWC Myanmar Business Guide, October 2017
[2] Cost of doing business in Myanmar, survey report 2017, DICA, JICA, MSR, 2017

hot season. The climate in upper Myanmar, particularly at altitudes ranging from about 300 to 1,220 m, is the most temperate throughout the year, while lower Myanmar, especially in the delta and coastal regions, is the most humid[3]. Mountainous flower and vegetable production areas like Pyin Oo Lwin and Taunggyi are classified as humid subtropical climate (Köppen climate classification 'Cwa').

Socio-cultural. Myanmar is a predominant Buddhist country with nearly 90% of its population being Buddhist. When dealing with Burmese, one should be aware of several cultural differences with many Western cultures. In general Burmese people do not raise their voice and think thoroughly before they speak so as to avoid unnecessarily offending someone. Age is highly respected and considered synonymous with experience and wisdom. Flowers form part of daily life, especially the more fragrant flowers are highly appreciated.

Floricultural hubs. The central zone of the country is of most interest to the floricultural sector. The flori-commercial centre of Myanmar is found in former capital city Yangon with a population of 7 million. From a production perspective, other than the surrounding areas around Yangon, Mandalay region and (south) Shan State are important. Specific mention needs to be made to Pyin Oo Lwin, labelled as the country's flower city, in Mandalay region. Pyin Oo Lwin city is located in the highlands at around 1100 meters above sea level. It is a tourist destination and is the centre of the country's principal flower and vegetable production. South Shan State near its capital city Taunggyi and surroundings as well as close to Heho and Kalaw highlands also house numerous small growers of different flowers.

Fiscal business context. Principal business entities in Myanmar are the private and public limited liability company, partnership and joint venture with a citizen, private company, cooperative society or state-owned economic organization and sole proprietorship. A 25% corporate tax rate applies to companies incorporated under the Myanmar Companies Act, enterprises operating under the foreign investment law (FIL) and foreign organizations that have obtained special permission to be engaged in state-sponsored projects, enterprises or undertakings. A branch of a foreign company also is taxed at a rate of 25% on Myanmar-source income. The tax year follows the fiscal year, starting 1 April and ending 31 March[4]. Myanmar does not levy a Value Added Tax (VAT). However, a commercial tax is levied as a turnover tax on goods and services. This commercial tax rate is in general 5%. There is a registration fee of MMK 500,000 payable to the Directorate of Investment and Company Administration for setting up a company or a branch in Myanmar[5]. There are two main laws providing incentives to foreign investors: the FIL and the Special Economic Zone Law (SEZ). Tax incentives under FIL include: a tax exemption for five consecutive years, a tax exemption for the production of goods or services and for reinvested profits; accelerated depreciation; 50% tax relief for export profits; and special deductions and exemptions from customs duty and domestic taxes on imported materials, machinery and equipment. Special corporate income tax incentives under the SEZ law include: a tax exemption for the first seven years for investors in a free zone; a tax exemption for the first five years for investors in a promotion zone; 50% relief for the second five years for investors in a free zone or promotion zone and 50% relief for the third five years if the profits are reinvested within one year; a tax exemption for the first eight years for a developer, 50% relief for the second five years; and 50% relief for the third five years if the profits are reinvested within one

[3] Nations Encyclopedia – Myanmar Climate
[4] KPMG Myanmar Tax Profile, update May 2016
[5] http://taxsummaries.pwc.com/ID/Myanmar-Corporate-Other-taxes

year. Thilawa Zone in Yangon is deemed the most important SEZ. There also is an exemption from import duty on certain goods[6].

Relationship with The Netherlands. This year the Myanmar-Netherlands relationship celebrates its 70-year anniversary, honouring the diplomatic relations between the two countries, established since 1947. Cooperation between the Netherlands and Myanmar has developed remarkably in recent years. This covers many sectors, including agriculture, tourism industry and management of water resources in Myanmar. Myanmar floricultural sector development and the promotion of Dutch-based Myanmar cultivated flowers would symbolise the Dutch-Myanmar shared passion and long-lasting relationship.

1.3 Myanmar flower market

The Myanmar flower market is impressive if only because of its sheer size and potential. A population of 55 million with a deeply founded love and appreciation for flowers and its largely Buddhist society, which dictates several flower offerings to Buddha per day, all make for a significant daily demand of fresh cut flowers. Fresh flowers are used in high-end hotels and restaurants, and for different occasions, like weddings, exhibitions and conferences, funerals, birthdays, and as corporate gifts or just as token of love or appreciation. Also bedding plants and other ornamentals for home gardens are cherished, be it in the cities or in rural areas. Main cut flowers on the market are Chrysanthemum, followed by Rose, Lilium, Calla Lilies, Gladiolus, Aster, Carnation, Jasmine and several more local products, such as orchids (mainly Dendrobium spp.), Frangipani, Heliconia and Anthurium. The overall quality of product available on the market is in general low. Despite all good efforts, the Myanmar flower sector is a traditional one which (i) lacks of (facilitation of) smart and sustainable production practices, (ii) generates and disseminates little knowledge and awareness from production to post-harvest and logistics handling and practices, (iii) operates on little or low technological support, (iv) lacks new variety, high yield, disease free plant material/flower bulbs and thereby misses the main building blocks for product quality, and (v) is insufficient in (grower) organisation and value chain infrastructure. Further to the above, and with the large labour force operating on low cost and Myanmar strategic location and geo-climatic diversity, it is fair to say that Myanmar floricultural sector operates at a fraction of its high potential.

[6] International Tax Myanmar Highlights 2017, Deloitte Touche Tohmatsu Limited

2 The flower supply chain

This section describes the floricultural value chain, its environment or climate, the value chain structure, its actors and the linkages between them. All, with the aim to identify the challenges, needs and opportunities it offers for (Dutch) floricultural business to the ultimate benefit, professionalisation and profitability of Myanmar floricultural sector. Figure 2 below depicts this in a simplified manner.

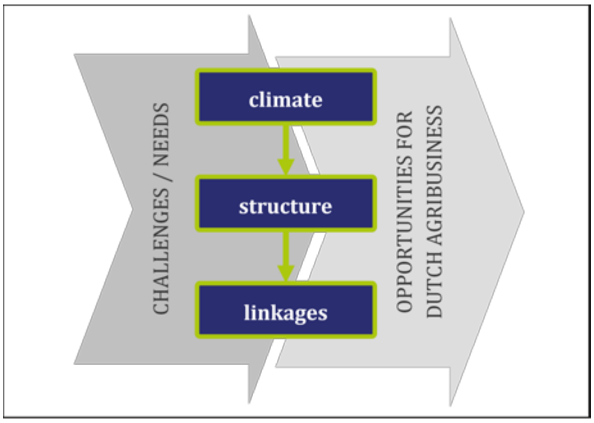

Figure 2.: Theoretical framework

2.1 Chain climate

Floriculture in Myanmar has an enormous potential to develop into a key agricultural sector. For generations, many small growers work very hard to make a living in cut flower cultivation. At the other end of the spectrum, Myanmar people rely on daily fresh supply of cut flowers not in the last place for the several daily offerings to Buddha. Yet, however important this sector is, it is still undervalued as an agricultural sub-sector. The Agricultural sector in Myanmar revolves to large extend around food security as a strategic priority, especially when it comes to priority staple crops like rice, but also important food crops like beans, pulses and oil seeds and commodities like coffee followed by fruits and vegetables. As to horticulture, developing the vegetables sector becomes increasingly important. Flowers -in general not for human food consumption- are as horticultural column not of strategic interest for this reason. Also contributing to the lack of attention to floriculture is the non-existence and availability of (reliable) data for government and sector alike to steer on. This, even though from a rural development and income generation perspective, many rural households can benefit from a thriving and just floricultural sector.

2.2 Chain structure

The Myanmar flower chain structure is rather straight forward. The flower producers comprise of many smallholders who sell mainly to traders located in the region. These traders have a logistic function in terms of arranging transport to traders located in or near the main market, such as Yangon. Street vendors and flower shops buy from these traders to sell to the end consumers for use at home or a variety of occasions. Depending on the physical distance to market, producers may also sell directly to traders at the wholesale market. Wholesale markets fulfil an important function in the chain. See also figure 3 below.

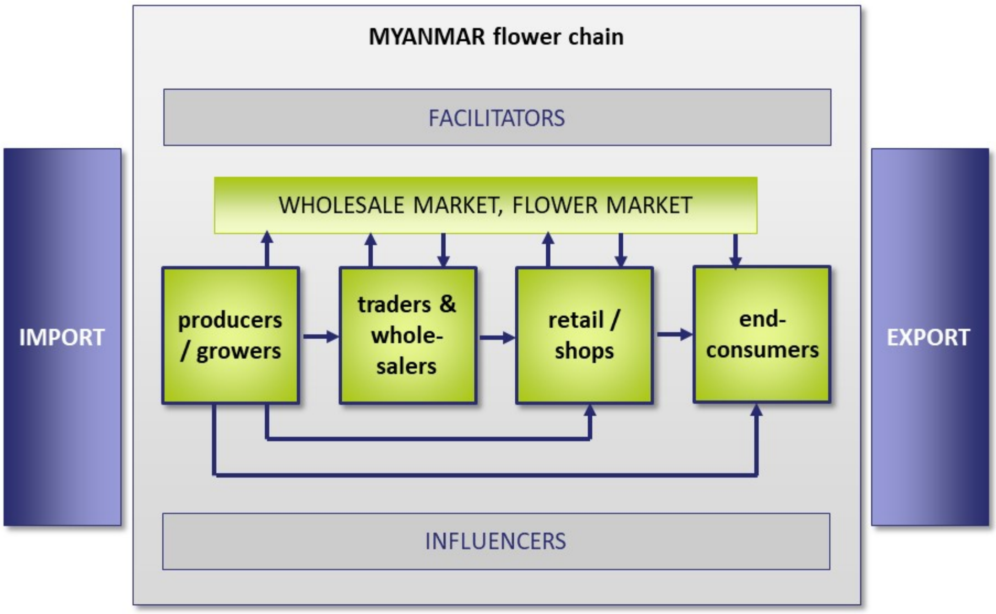

Figure 3.: Floricultural value chain Myanmar

import-based streams. There are few flower varieties grown in Myanmar. New varieties are mainly imported from the neighbouring countries, of which the vast majority from China. These flowers include Lilium, Calla Lilies, Gladiolus, and Carnation. Orchids come mainly from Thailand. Imported flowers come from the borders and go directly to the major cities like Yangon and Mandalay and from there distributed to other cities in Myanmar. Though many of the Chinese flowers are sold at the wholesale markets through local traders, some Chinese even hold shop and sell directly.

local streams. Other than imported flowers, there is significant local production. The sales of these flowers are through two types of intermediaries, one based in the local growing areas and the other at the wholesale markets. These traders sell to the street vendors who in turn sell to the end users. Some growers may also sell directly to the wholesale markets. In some cases, like with orchids, growers may sell directly to the retail shops or even directly to consumers via web shops. Different flower types may reach consumers through different supply chain routings. For example, rose growers can pack and send their roses directly to the wholesale market in Yangon, yet at the meantime, Chrysanthemum growers sell to the local intermediaries first who in turn transfer and sell to intermediaries at WSM. Again, street vendors buy from the wholesale markets and sell on the markets in just about every township. Most of the consumers buy from these street vendors. Hotels and Florists buy directly from the traders at the wholesale market, or, for certain events or weddings, depending on the budget of the customer, floral shops order directly from the Chinese companies to order the varieties they need for their customer.

price structure. There are no data on prices readily available. According to data collected from several growers, intermediaries, wholesalers and retailers in the quick scan preceding this report, the average prices of the main cut flowers in the market are indicated in below table 2. Please note that the second column shows the estimated number of growers in Myanmar. Grower earnings are guesstimates of average earnings by growers per stem. Regional trader and WSM trader columns indicate earned commissions in Kyat. The last column shows the retail prices. Depending on the season and demand towards special occasions, such as Valentine’s day, prices may fluctuate.

Cut flower	number of growers (est. amounts)	Grower earnings (Kyat/stem)	regional trader (commission Kyat/stem)	WSM trader (commission Kyat/stem)	Retail (price in Kyat/stem)
Chrysanthemum	400-500	65-100	20-30	20-30	200-300
Rose	150-200	30-50	N.A.	20-30	80-100
Lilium[7]	3-5	600-800	No data	No data	1000-1500
Gladiolus	80-100	10-50	10-20	20-30	100-150
Other local varieties	400-500	40-50	10-20	20-30	100-150

Table 2.: Main cut flower estimated sales prices and margins (Kyat)

2.3 Key actors and linkages

2.3.1 Producers

Cut flowers are grown on plots ranging between 0.6 and 0.7 acres in size (approx. 0.25 ha). Horticulture products, including flowers, but also fresh fruits and vegetables, provide earnings for about 15% of rural households in Myanmar[8].

The three main types of cut flowers produced in Myanmar are Chrysanthemum, which are estimated to be 60-70% of the total acreage, followed by Rose and Gladiolus. Demand for Lilies is high; however, the vast majority is not grown in Myanmar, but imported from China.

Production is centred around (South) Shan State, Pyin Oo Lwin district (Mandalay region) and Yangon region surrounding the main market Yangon city. About half of all Chrysanthemum is grown in Pyin Oo Lwin ('POL') district, about twenty percent in Shan State and the remainder in the other flower producing areas of the country. Most of the growers sell to the wholesale markets in Yangon and Mandalay.

Growers have access to limited resources, including financial assistance, and operate with little or no technology. Growers are highly dependent on intermediaries, who oftentimes also supply agro-inputs such as agro-chemicals and fertilizers, and also loans with high interest rates of up to 120%-240% per year. This puts the grower in a vulnerable and dependent position. Growers have no control over the sales price. Chrysanthemum sometimes sell at profit, sometimes at loss. Roses have more stable selling price. Risk of low market prices or unsold product is absorbed by the grower and payment by trader to grower is after all product is sold by the trader. Even in some seasons, when flower supply is higher than demand, it is just the intermediaries that make a profit, whilst their supplying growers suffer a loss.

[7] Lily import is 99.9% from China and there are no proper data available yet. FMK Business Support Co., Ltd. recently imported Lilium bulbs from the Netherlands and this year a few growers are growing Lilium. There were only 2-5 growers before with bulbs from China, which bulbs they grow a few times after which they dump the bulbs in Myanmar at a high price, according to the interviewed growers. In the rainy season, Burmese growers do not grow and Chinese Lily flowers directly hit Yangon market in large quantities at prices between 400-1000 Kyat per stem.
[8] Strategic Choices for the Future of Agriculture in Myanmar: A Summary Paper, USAID, 2013.

Cultivation is mostly open field without any protected cultivation, post-harvest facilities and logistics. There is a general across-the-border lack of knowledge in terms of production planning, seeds and planting material, cultivation techniques, input supplies, product handling, IPM, post-harvest and marketing. Plant material and bulbs are replanted on-farm, resulting in loss of quality, old varieties prone to diseases, little variety in type, colour and shape, and in general low and non-uniform yields. Some officials claim that up to 95% of the growers obtain their flowers from re-planting their own harvested and dried bulbs. Poor handling affects already poor-quality flowers even more. Agro-chemicals are applied without any protection, which causes cancer and other diseases with the workers.

Growers have no- or low-technology small scale operations. These smallholders, mostly scattered and unorganised, want to form self-initiated cooperatives, as the existing government organised cooperatives are not perceived as effective and can't help the growers properly in addressing their needs. To introduce a new breed of market oriented and empowering cooperatives, government support is needed.

2.3.2 Traders & wholesalers

Flowers are mainly sold via intermediaries. There are two types of intermediaries, the regional trader and the wholesale market trader. The local intermediaries/brokers buy directly from the growers, then sell to the trader at the wholesale market. The traders from the wholesale market buy from the local broker or directly from the growers. The intermediaries pay for transportation and other costs, and after deducting these and their profit margin,

they pay what is left to the growers. Depending on the market price and available supply surpluses, this sometimes results in a loss to the growers as earlier mentioned. Because of the lack of market information and transparency, growers in one area all grow the same crop at the same time, which flowers are harvested at the same time, resulting in supply surpluses to the market. The intermediaries also clear their bills once a month or sometimes every two months. This poses an additional problem to growers.

Chinese traders. There are basically two Chinese companies active in Yangon. They have been in Myanmar for more than three years. At first, they imported flowers mainly for events and the florists in Myanmar. Then they started with structural flower import from China through illegal border trade, most of which were class C reject flowers from Kunming flower auction. They mainly imported Lily, Calla (Zantedeschia), Tulips (seasonal), Buttercup (Ranunculus), and some Iris. Later on, they realised there is the market for Lily especially for the usage of offerings to Buddha, Buddhist events and events of other religions. Lilium gained popularity because of its long vase life and fragrance. These Chinese companies now also bought two shops at Thiri Mingalar wholesale market to expand their business. In the rainy season, they import 6-10 trucks (10 wheelers) and in winter, they import 3-6 trucks every other day. To further expand their market foothold, they just recently also started growing Lilium in South Shan State.

2.3.3 Wholesale markets

The wholesale market in Myanmar plays a vital role in the flower supply chain. By far the biggest and most important wholesale market (WSM) for cut flowers is the Thiri Mingalar WSM. It is a fresh produce and spices market with an impressive flower section. Most flowers find their way through different traders from South Shan State, the area surrounding Nay Pyi Taw, Pyay area, Pyin Oo Lwin and the production areas close to Yangon. The cut flowers are transported in Express buses and small trucks, usually packed in big bamboo baskets or cardboard boxes filled with ice blocks in an effort to the keep the flowers cool.



2.3.4 Retail

Street market vendors. Street market vendors are found in clusters in the main townships of Yangon. They buy their seasonal flowers mainly from Thiri Mingalar or other Yangon wholesale markets like San Pya and Gyo Gone. The street market vendors offer mostly cheap, but also more expensive flowers, depending on the area and season. Chrysanthemum is the most popular flower for its availability, sturdiness, price, and vase life. Roses and gladiolus are the other main varieties after Chrysanthemum, yet sometimes, because of the inferior quality, the buds are not even flowering, and damaged at bud stage. High-end markets even use imported flowers from China and people pay a (premium) price although the quality is poor, because of the two to three days transportation time without cooling.

Flower shops. There are not many florists in the main flower market Yangon. Florists sell artificial flowers at the same time. The arrangements, though beautiful, are -for Myanmar standards- steeply priced, comparable with Western European prices. The arrangements are mostly made to order and home delivered on request. Popular flowers at florists are roses. Like in many places in the world, sales go up significantly for Valentine day. Buddhist New Year ('Thingyan'), usually falling around mid-April, is also peak period.

2.3.5 End use, consumers

As earlier mentioned, Myanmar is a big market with 55 million inhabitants who all love flowers. Despite the rapid growth of Myanmar middle class, purchasing power is still relatively low[9]. Consumers chose flowers based primarily on price and vase life, with higher income brackets buying more Lilies, Roses and Gerbera and lower income brackets more flowers like Gladiolus, and Chrysanthemum. Chrysanthemum is appreciated by all layers of society for all events.

Up till 80-90% of purchased flowers are used for religious purposes. Every home has one till as many as fifteen flower vases, which flowers are replaced with fresh ones 1-2 times a week. Altogether, the consumption of 60-100 million stems per week are used for religious purpose. Widely used flowers are Chrysanthemum, roses, gladiolus and other seasonal local varieties. Most flowers are bought at the nearby street markets.

The trend of flower usage in events and weddings is gaining popularity and depends on the spending power. Nowadays people are willing to spend EUR 500-15,000 for the usage of flowers in those events, some even specially imported from China just for the occasion.

Not only the Buddhist population is offering flowers. Also for other religious ceremonies the use of cut flowers is becoming more and more popular, especially Lily.

Hotels use flowers for every event, yet they still mix with artificial flowers. Depending on the spending power and request of the customers, they use more and more expensive flowers. The standard spending on flowers per wedding or event is around EUR 100-4000. If the wedding arranger use florists to decorate the hotel wedding accommodation with flower arrangements, they spend between EUR 300 and 4000 per wedding. For weddings, most commonly used flowers are Lily, Roses, Daisy, Dianthus, and Gypsophila.

Some basic preferred flower profiles are:

- **Chrysanthemum.** The most widely used flowers, the most preferred colour is white followed by yellow and orange. Demand is big and stable. Everyday about 7-10 trucks (12 wheelers) hit Yangon wholesale markets and approximately 30 trucks of Chrysanthemum daily supply the whole country.
- **Rose.** The most preferred colour is red, followed by yellow and white. Demand is stable and more in the months of October-December and February. Everyday about 3-5 trucks are coming just to supply Yangon and approximately about 12-15 trucks per day to furnish the whole market. Some colours like blue (dyed), cream and pink are imported from China. To manage bud development, the buds are individually sleeved.
- **Lilium.** Lily is the most popular flower these days because of its fragrance and vase life. Consumers use Lilium as offerings to Buddha or for religious ceremonies. They first look

[9] According to World Bank data, Myanmar belongs to the lower-middle-income economy bracket (GNI per capita USD 1046 – USD 4125).

at the appearance of the flowers and secondly smell its fragrance, which is also very important. Until now, all are imported from China (around 5-8 million stems/year). Most of the Lilies that originate from China are white and pink. Some other colours are fake, using dye to create 'beautiful' colours.

- **Gladiolus.** Gladiolus was very popular in the past and the flower is known as 'Holland flower', but the varieties the growers nowadays grow are cultivated from degenerated 20-40-year-old varieties, which are harvested and replanted over and over again. The varieties are 'ancient', quality is poor, image is bad and therefore prices are low. Demand is stable, yet not many suppliers and growers are able to generate healthy profits from Gladiolus. In the rainy season, growers grow Gladiolus in Pyin Oo Lwin. In Pyay they grow Gladiolus year-round.
- **Aster.** Aster is another popular flower, because of its relatively low prices. Asters are mainly grown in Pyin Oo Lwin and Pyay. Every day around 4-5 trucks come to Yangon and around 8-12 trucks to supply the whole domestic market.
- **Dianthus.** Another well- known variety, imported mainly from China. The price is in the affordable range for the growing middle-class segment and demand is stable. Carnations enjoy appreciation for their shape and colours.

2.3.6 Facilitators

Different facilitators to Myanmar flower sector are distinguished in this part, such as input suppliers, technology and equipment providers, knowledge institutions, financial institutions and branch organisations.

Input suppliers. The biggest player in the business of agro-inputs, like pesticides and fertilizer, is AWBA. The head quarter is located in Yangon, having many branch offices and distributers throughout the country. AWBA has 60-70% of the market share. They have different products from different countries in their portfolio, from China to Germany. AWBA has all the chemicals and a lot of projects working with different stakeholders, in seed sector, pest control, insurance and so on. They also provide credits to farmers in certain crops, not yet including floriculture. Where AWBA is the main supplier for agro-inputs in the market, the company Marlarmyaing follows in second place. Marlarmyaing sells different brands. Their market share is far less than AWBA. Marlarmyaing has a credit system (micro financing) set in place to support farmers. Again, for certain crops except for floricultural production. The company works together with the government in some farmer support programs. There are no specialised flower input suppliers in Myanmar. Growers buy their fertilizers, pesticides and herbicides usually from the traders who buy their harvested flowers. Planting material the growers mostly multiply and replant themselves. Further, with no specialised dedicated channel to supply and inform growers on which chemical to apply when and how, it is no wonder that many growers are of the perception

that the more they apply, the higher the quality of harvested product is. Too much and wrongly applied agro-chemicals do not contribute to better flower quality, harm the environment, and make for high cost of supplies. A lot of fertilizers and pesticides from China are coming in via border trade. Instructions come in Chinese. Growers don't understand and use these as cheap substitute, guessing dose and application. Growers do not have access to (new) knowledge. They grow based on experience. This makes that qualified seed suppliers are not present either; growers just cater to their own seeds needs by multiplying bulbs and seeds themselves. Small amounts of poor-quality bulbs enter from China illegally. These bulbs are difficult to have access to by many growers and there is no choice for variety and colour.

Technology and equipment providers. Flower production in Myanmar is open field. With the exception of a few companies in the region, there are no greenhouse suppliers present in Myanmar, except for maybe some agents who focus on protected vegetables production. For irrigation-, shading- and other equipment, flower growers can turn to equipment suppliers for fruit and vegetables. However, other than some basic inputs, flower growers cultivate, sort, store and pack using no technology. This is expected to change in the next years.

Knowledge institutions. Myanmar is equipped with several agricultural knowledge institutions. The main university for agriculture is Yezin Agricultural University (YAU). On a vocational level, there are 14 State Agricultural Institutes (SAIs) throughout the country. Both the academic and vocational institutes lack the knowledge on floriculture to deliver a next generation of more educated growers. Lectures just lack the required knowledge on flowers themselves. The Ministry of Agriculture, Livestock and Irrigation (MoALI) has its extension officers at its deposal to assist farmers in managing their (technical) operations. The extension officers focus on food crops and with the flower sector not being recognised, the extension officers lack the necessary knowledge on flower cultivation. While as extension officers should actually be the main channel through which growers get access to (new) knowledge and good farming practices, resulting in higher yields and higher income. The main problem is that the government and other institutions, including local and international NGOs, focus mainly on edible crops, not flowers.

Financial Institutions. There are a few Agricultural banks, both state owned and private. These institutions have some SME loans for farmers' cooperatives. Yet again, banks focus in horticulture only on the vegetables and fruit sectors. Now, slowly, banks are becoming aware of the potential of certain flower companies. Even, a first loan was recently granted for contract farming operations with 20 growers of Lilium and Gladiolus in South Shan State. CB Bank and an investment group named Young Investment Group is now also interested in microfinancing. The Rabobank works together with the YOMA Bank in Myanmar with loans packages for the agricultural sector in their portfolio, yet the flower sector is still out of this scope. Credit insurances or government-backed guarantees are not yet in place to facilitate the sector.

Branch organisations. Myanmar Fruit, Flower and Vegetable Producer and Exporter Association ("MFVP") was established in 2006. It is affiliated to UMFCCI (The Republic of the Union of Myanmar Federation of Chambers of Commerce and Industry), which houses all trade associations in Myanmar. MFVP Flower Cluster focusses on capacity building and marketing support for the sector and its growers.

2.3.7 Influencers

The key institutional/policy factors influencing the floricultural sector performance include, but are not limited to, the government, including the relevant ministries and departments as well as the prevailing laws and regulations, media, and development agencies and international and local NGOs.

Government. The main institution influencing performance of the Myanmar floricultural sector, is the Department of Agriculture under MoALI, and more specifically the Plant Protection Division (PPD) and the Department of Agricultural Research (DAR). PPD is also responsible for facilitating and regulating imports of agro-inputs, such as described under section 4.3 below. The Ministry of Trade and Commerce and the Myanmar Customs Department also play an important role in cross border transactions. Where DAR is focussed on generating knowledge through research, Yezin Agricultural University and the different State Agricultural Institutes focus on agricultural education. None of these institutes have sufficient expertise on floriculture. With little interest in the floricultural so far, the government is now acknowledging the importance of floriculture and some institutes are now conducting flower trials and are even considering adopting floriculture in their curriculum. Aeres and WUR are involved in projects to build the capacities of the different Myanmar agricultural knowledge institutions.

Media and mobiles. Media is one of the crucial part of the agriculture sector. The most widely used media for farmers is Radio, which is followed by the Facebook and Journals. There are a few farmer TV channels, but the majority of farmers barely watch these. The professionalisation of the flower sector in Myanmar took off in 2017 Flower sector and with the help of ample media attention government became aware of the importance and potential of the sector to the country. Online and offline media started to care about floriculture and now the sector is starting to understand the importance of quality plant material, knowledge, the rightful technologies and management for a profitable sector. Mobile phones are widely used in Myanmar and there are about 33 million users in Myanmar, in which smart phone usage is 80%. There are a few farmer application apps and one of the well-known apps for farmers is ‘Golden Paddy’, which was developed by Erwin Sikma, a Dutch Entrepreneur. Social media and online influencers, such as bloggers and group fora on Twitter and Facebook, are becoming increasingly important as sector marketers.

NGO’s and developing agencies. All NGOs are focusing on edible crops, not on flowers. There are a few Dutch NGOs which are helping growers in the field. Agriterra is a Dutch NGO, helping to form farmer cooperatives. They entered Myanmar in 2016. Agriterra is interested in supporting the flower sector and is currently seeking ways to work together with MoALI. AgriProFocus is another NGO, or actually a network, bringing together agripreneurs, private sector companies, civil society organisations, knowledge institutes and governments around specific questions, issues and opportunities. AgriProFocus current focus is on the dairy sector.

Multilateral donor and development agencies, such as the Asian Development Bank (ADB), World Bank, Food and Agriculture Organisation (FAO) and The International Fund for Agricultural Development (IFAD) are successfully supporting the development of Myanmar agricultural sectors and peripheral sectors like (agro)tourism. Yet, again, flower growers are not yet on their priority compass.

2.4 Issues, trends and developments

Myanmar floricultural sector has to overcome issues like illegal border trade, quality of product, process and management, and the structural lack of information and required knowledge ('dealing in the dark'). There are positive trends and developments visible in awareness and attitude of the Government and for instance in how the internet, social media and penetration of smart phones contribute to a further enticed demand and inclusion of growers. To meet this market appetite for better quality and more choice, international exporters of plant material should have to comfort of having their proprietary varieties protected and a trustworthy transparent image of import requirements and procedures.

Illegal border trade. The most disrupting challenge Myanmar floricultural sector faces, is the illegal border trade from China. Illegal flowers and bulbs find their way to the Myanmar market, many of which originating or rejected from Kunming flower markets. This trend has been getting worse over the last ten years. Chinese flowers dumped on the Burmese market affect Myanmar locally produced flower prices.

Illegal Chinese flowers directly hit the Yangon wholesale market without being subject to any quality control, documentation, import tariffs, duties, or taxes paid. Myanmar flower prices have dropped and local growers carry the most of this financial burden. Chrysanthemum growers have mentioned that one out of three transactions even result in a loss, which makes it very hard to sustain their farming business, let alone, expand or invest in new technologies or improved agro-inputs, bulbs, seeds or cultivation equipment. Local growers just cannot compete and some even were forced to stop growing flowers altogether.

The Myanmar Ministry of Border Affairs with the support of the Ministry of Agriculture, Livestock and Irrigation are urged to take more control of the illegal border trade through strict and clear regulations, control and enforcement. Insufficient knowledge and laboratory facilities to conduct phytosanitary tests at the border would also need to be tackled counting on the support of the Netherlands.

Variety protection. To date, Myanmar is not a member of UPOV 91 (International Union for the Protection of New Varieties of Plants)[10]. The country has however initiated the procedure for acceding to the UPOV Convention. At the end of 2017 the UPOV Council took a positive decision on the conformity of the "Draft Law on New Plant Variety Protection" ("Draft Law") of Myanmar with the provisions of the 1991 Act of the UPOV Convention, which allows Myanmar -once the Draft Law is adopted with no changes and the Law is in force- to deposit its instrument of accession to the 1991 Act. The UPOV Convention provides the basis for UPOV members to encourage plant breeding by granting breeders of new plant varieties an intellectual property right (breeder's right). Myanmar is member of the East Asia Plant Variety Protection Forum (EAPVPF), which is being held as a venue for the organisations in charge of protecting plant varieties in nations of East Asia (ASEAN +3) to exchange a wide range of ideas and information to facilitate the improvement of the implementation and the harmonization of the plant variety protection (PVP) system in the Asian region through cooperative efforts and mutual understanding of each country's systems and conditions. Based on EAPVPF with the support of Japan, various plant variety protection collaborative programs are foreseen. Dr. Aung Thu, the residing Minister of Agriculture, Livestock and Irrigation has a clear understanding and drive that Myanmar breeding has to be improved and in doing so, good cooperation between public and private breeding is required. A Plant Variety Protection system in line with UPOV 91 convention is a sound basis to protect breeders' rights to which Naktuinbouw[11] is assisting Myanmar in a 3-year project. The Myanmar PVP law was designed and approved in 2016. The 1st PVP law of Myanmar got into force in January 2017. Since then, the law is in process of being amended to be fully in line with UPOV regulation. The PVP office in Myanmar is situated in the DAR (Department of Agricultural Research) station in Nay Pyi Taw. Naktuinbouw has been and still is strengthening the PVP office by building its capacities through training and several incoming and outgoing visits.

Electronic certification. Recently the Netherlands Food and Consumer Product Safety Authority (NVWA) visited Myanmar for an electronic certification (e-Cert) feasibility mission. General use of automated support systems that enables digital information exchange between public and private stakeholders (competent authorities and exporting/importing companies) will facilitate trade and mitigate risks for Myanmar. Electronic certification of agricultural goods is a must for reliable and timely information and information exchange. Firstly, for combating international trade fraud, secondly, to enable the smoothest possible border passage without delays, and, thirdly, to enable the checks on agricultural goods to flow optimally.

Seed sector. With the aim to improve agricultural productivity, a 4-year Integrated Seed Sector Development (ISSD) project has started between Wageningen University, The Netherlands and DoA (Myanmar Department of Agriculture), which will lead to improved smallholder farmer access and uptake of quality seed of improved and well adapted varieties in the Dry Zone area of

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[10] UPOV membership overview, October 2017

[11] Naktuinbouw (the Netherlands Inspection Service for Horticulture) promotes and monitors the quality of products, processes and production chains in the horticultural sector. The focus is on propagating material (seed and planting materials). Naktuinbouw is an Autonomous Public Body regulated by the Dutch Ministry of Economic Affairs.

Myanmar. A road map has been developed and the first National Seed Platform mission took place last year. Component 1 in this project is to review and develop seed regulation.

After the 3rd regional round table discussion, the second National Seed Platform Meeting was held in Nay Pyi Daw, which meeting covered six major and six minor processes, including variety registration process, fees, one-stop service, and digitalisation.

Low yield, low quality. Flower production is Myanmar is done for generations, where knowledge and practices are transferred from father to son. There is a lack of knowledge in basically all fields from production to marketing, which makes for serious loss of opportunity in terms of meeting the large demand volume-wise, quality-wise and also translated in terms of sufficient income for the growers. With a few exceptions there, flowers are produced in open field cultivation without the use of shading nets, irrigation equipment or substrates. Fertilizers, pesticides and other agro-chemicals are sufficiently available on the market at reasonably high prices. Growers' empowerment and organisation is needed to develop a more sustainable sector.

Information. It seems that the Myanmar government is slowly starting to acknowledge the flower sector as a strategically important agricultural column. However, with no statistical information available on the sector, is still a black box. It is foreseen that the government will invest in professionalising the ornamental and cut flower sector, which means collecting quantitative (such as area, yield, market prices) and qualitative (such as practices, dynamics, trends and the like) information and sharing the analysed information with the sector. Using (mass) media channels, like radio and television broadcasts, articles in newspapers or horticultural magazines, or the use of internet and social media, and mobile applications, can all help to make these valuable data and information available to the sector.

3 Sector analysis

3.1 Introduction

Myanmar's current agricultural performance offers opportunities for successful agricultural development. Average yield and labour productivity is still one of the lowest in Asia, but at the same time, labour costs are low. The horticultural sector in Myanmar has the potential to become one of the most important agricultural sectors in terms of economic growth, rural employment and income generation[12].

Economically, neighbouring countries China, Thailand and Vietnam, benefit from export of horticultural products and supplies to Myanmar. These can be agro-inputs, such as fertilizers and agro-chemicals, flowers, esp. Lilies from China, seeds and bulbs, greenhouse structures (low- and mid-tech), and horticultural equipment. India is more of an off-taker of agricultural products from Myanmar, oftentimes also for re-export to the European Union. Because of the relatively strong Euro and weak Myanmar Kyat, not too many products are imported from the European Union. Only recently the first containers with Dutch planting material were exported to Myanmar. Local Myanmar flowers, foliage and products like bamboo, offer potential to be further professionalised in their cultivation for export to EU. More intensified and structural cooperation is a prerequisite to meet the buyers' expectations pertaining to quality, uniformity and continuity of supply. With the support of NVWA[13], the Netherlands government assists Myanmar with a project to introduce import related quality control and improve phytosanitary regulation and certificates according to WTO standards, whereby the parties seek to find a Myanmar compatible balance between risk control and trade facilitation.

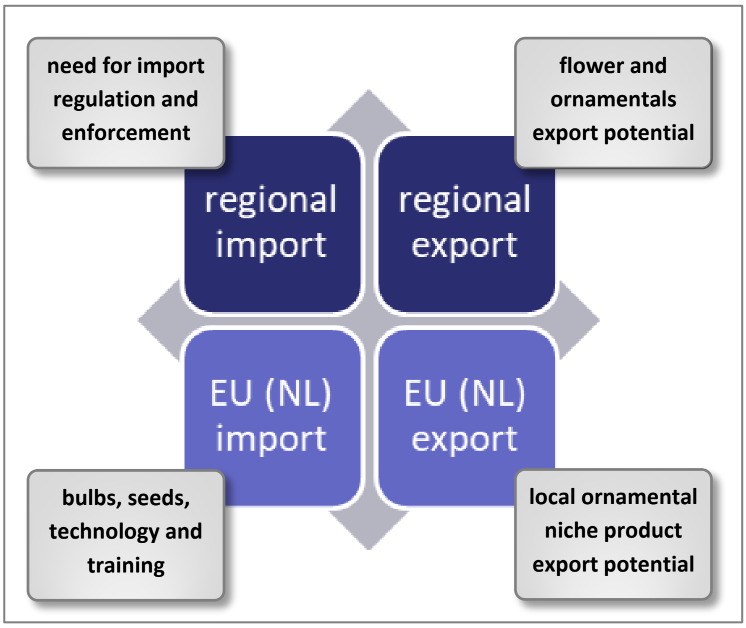

Figure 4.: Regional dynamics

3.2 SWOT sector analysis

This section gives an overview of the internal and external factors that are favourable and non-favourable to the Myanmar floricultural sector. Below so-called 'SWOT analysis' is to provide insight to the sector's strengths and weaknesses (internal analysis, table 2 below) and the opportunities, issues and challenges it provides (external analysis, table 3 below) towards the

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[12] Agriculture in Myanmar factsheet, Ministry of Foreign Affairs, The Netherlands, October 2015.
[13] The Dutch NVWA safeguards the health of animals and plants, animal welfare and the safety of food and consumer products and maintains the legislation in the field of nature.

achievement of its goals. The listing can be used to determine and prioritise strategic objectives by both current stakeholders and new entrants alike.

Table 2.: SWOT **internal** analysis

INTERNAL ANALYSIS	
strengths	**weaknesses**
• Large domestic market with more than 55 million flower loving inhabitants. • Strategic location of Myanmar in Asia with large flower loving markets as neighbouring countries. Sandwiched between the two biggest population markets India and China. • Myanmar as a predominant Buddhist country boosts flower consumption through flower offerings multiple times per day. • Climatological diversity allows for cultivation of a wide range of flowers. • Abundant fertile land available for cultivation. • Competitive through low cost of assets and operations as well as the lowest cost of labour compared to other ASEAN countries. • Young democracy next generation leaders welcome international and Dutch support and interventions to elevate the sector. • Good mobile communications infrastructure; even most smallholders in remote areas have smart phones. • Burmese people are in general loyal sector participants, creative and eager to learn and develop their skill set. • Myanmar embarked on widespread economic reforms adopting practices and lessons learned from fellow ASEAN member countries. • Myanmar consumer looks for more choice and variety of flowers.	• Little knowledge on production, post-harvest and marketing available in the sector. • Information poverty; no statistical data available on the sector, (almost) no market information available to align and guide development of the sector. • No adequate (cold chain) infrastructure available on all levels and regions of the value chain. • Many small producers are highly dependent on intermediaries and have little access to market information and as good as no access to finance. • Growers are in general not organised, or organised through ineffective top-down government driven cooperative structures. • Illegal import of flowers and plant material from China or (often times) reject or dumped products flood the market and kill healthy prices for local flowers. • No sustainable cultivation practices with little or no awareness on environment-health and safety of and by workers. • Complex and in-transparent licence procedures. • Flower sector, though high in potential, low on priority list of agricultural reform agenda. • No or low technology cultivation hampers sector development. • No clear phytosanitary policies and no market protective enforcement in place. • Very slim ornamental assortment and poor-quality flowers. • Relatively high priced and unreliable or poor quality agro-inputs, such as fertilizers and herbicides, pesticides or crop protection products. • Sector based on local and Chinese low-quality seeds, bulbs and cuttings.

Table 3.: SWOT **external** analysis

EXTERNAL ANALYSIS	
opportunities	**threats**
Export of quality plant material / flower bulbs from the Netherlands (whilst supporting proper cultivation and post-harvest practices).	Inadequate or no structural government actions to eradicate illegal border trade.
Introduction and development of new cut flowers and bedding plant varieties.	Dropping business confidence in Myanmar due to disappointment of slow reform.
Elevating the quality of existing cut flowers through better cultivation, handling, storage, logistic and marketing practices.	Rakhine issue: International community perception may result in decrease in international support.
Production organisation; Establishing or facilitating the establishment of cooperative structures, such as grower associations, and smaller and larger cooperatives.	Red tape or legal inconsistencies hampers creating a conducive environment for sector reform.
Capacity building; institutional strengthening of horticultural governing, research and education, establishing of farmer field schools, promoting farmer study groups, on-farm research, excursions, train-the-trainer programs.	Seed laws and customs inconsistencies in awareness or interpretation of import related legalities stand in the way of importing needed sector supporting equipment, technologies, products and related knowledge transfer.
Joint venture; Greenfield investment opportunities in production and retail, esp. controlled chain operations.	Training and extension services are hampered by the many still unorganised growers. Little or no peer-to-peer learning infrastructure will leave sector development lacking behind compared to Myanmar neighbouring countries.
Outsourcing of labour intensive activities by international off-takers.	Lack of access, information and organisation/scale hampers the introduction of innovations and technologies backed by (micro) finance schemes.
Introduction of low and mid tech protected cultivation and production technologies.	Financial Institutions may well not be inclined to extend required loans to growers or cooperatives if not backed by the government or with additional sector relevant insurance packages.
Climate controlled warehouses, cold stores and reefers.	
Development of local ornamental business, such as bamboo, orchids.	
Vast horti-tourism opportunities and initiatives will further push for a broader spectrum higher quality, better organised floricultural sector and will offer ample opportunities by itself to invest in. Additional spin-off is the steep growth in number of 4- and 5-star hotels that need weekly fresh flowers of good quality and with week-long vase life.	
Export potential of Myanmar grown flowers to regional markets.	

3.3 Chain performance

Figure 5. below, illustrates how the sector performs in a nutshell. Availability and access to reliable up-to-date information is crucial for the sector to be effective in its efforts to professionalise and upgrade its performance with confidence. The level of cooperation, or perceived value of growers towards cooperative structures is also significantly hampering sector development. Effective cooperation for Myanmar's floricultural value chain (based on added value, a sense belonging, ownership and trust) is indispensable for information sharing, innovation and value creation, which is needed to significantly elevate its performance. Project or program-based cooperation can assist in speeding up innovations and technological developments. The 'Triple Helix' concept, whereby Government, Universities and Industry jointly develop and implement projects, has proven a successful approach in The Netherlands to create value and boost sector competitiveness[14]. Grower-to-grower cooperation in the form of producers' associations, sector initiated cooperatives, study groups or otherwise, is a must for Myanmar to swiftly professionalise and exploit its sheer size and potential in the shortest time span.

Figure 5.: Flower chain performance indication

FLOWER SECTOR MYANMAR					
indicators	**assessment**				
	very weak	weak	average	strong	very strong
Power distribution	☐	☒	☐	☐	☐
Information flow from market to producer	☒	☐	☐	☐	☐
Transparency, engagement and labelling	☒	☐	☐	☐	☐
Vision, direction	☐	☐	☒	☐	☐
margins	☐	☒	☐	☐	☐
cooperation	☒	☐	☐	☐	☐
Innovation, technological development	☒	☐	☐	☐	☐
Knowledge dissemination	☒	☐	☐	☐	☐
Opportunities for Dutch companies	☐	☐	☒	☐	☐

[14] Currently for development or innovation public-private partnership projects, The Netherlands prefers the more inclusive 'Dutch Diamond' variant, where other than government, university and industry, also a civil society or NGO is actively involved in the partnership.

3.4 Stakeholders

The following main actors partake in or influence the Myanmar floricultural sector:

- Growers
- Input suppliers
- Traders and intermediaries
- Wholesale markets (WSM)
- street market vendors
- florists
- end users, consumers
- Ministry of Agriculture, Livestock and Irrigation (MoALI)
- Ministry of Border Affairs (MBA)
- Department of Agricultural Research (DAR)
- Yezin Agricultural University (YAU)
- State Agricultural Institutes (SAIs)
- Media
- Financial institutions (FI)
- civil society organisations, NGO's
- Relevant branch organisation(s) (MFVP)

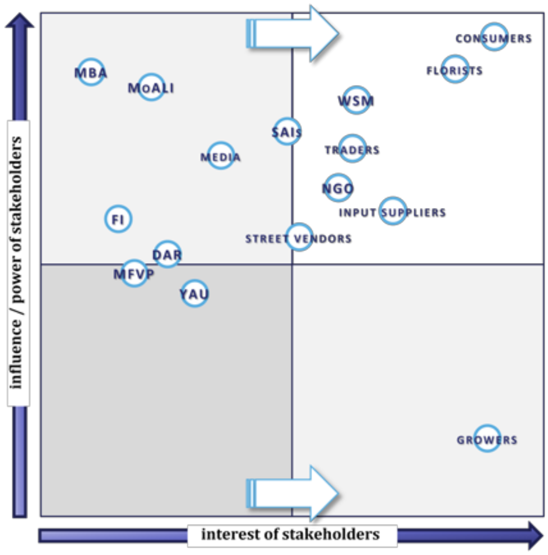

Figure 6.: Power-Interest Grid Stakeholders Floricultural sector Myanmar

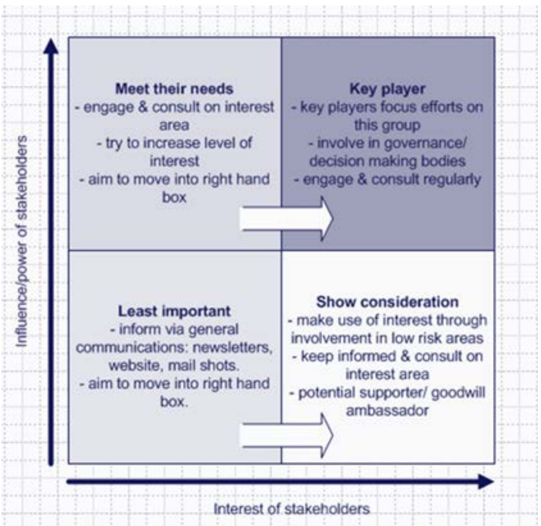

Figure 7.: Stakeholder matrix (Eden and Ackermann, 1998)

The stakeholders from this non-exhaustive list can in some way or another, influence or affect the performance of the sector in a negative or positive way, or be affected by the influence or actions of others. The degree of (a) interest and (b) influence or power the different stakeholders have, should be considered when developing projects, programs, interventions or initiatives. The stakeholder matrix can be of help in designing an inclusive communication and participation strategy (see figure 6 and 7 below). A focus on engagement and reciprocation (win-win) is key to developing successful (floricultural) projects in Myanmar.

4 Opportunities for Dutch companies

This section deals with the different challenges and needs of the Myanmar floricultural sector, as well as the opportunities it offers for Dutch companies to support, trade with or invest in this sector. This section furthermore describes some considerations and potential risks associated therewith; all in the spirit of sustainable cooperation, realistic expectations and lasting relationships.

4.1 Challenges and needs

Potential and awareness. The high potential floricultural sector in Myanmar is at the brink of professional take off from a near to zero technology based family business operation driven sector to become a regional flower 'power house'. Its geo-diversity allows for year-round production of a wide range of floricultural products. In addition, its 55 million large market and through ASEAN an extended market of hundreds of millions more, offers ample demand to produce in a professional manner many types of cut flowers, houseplants (for instance in offices), seasonal flowering bedding plants, garden plants and containerised pot plants. The love for flowers by the Burmese and the religious importance of flowers are unfortunately not sufficiently reflected in the professional architecture of the Burmese floricultural industry or the facilitating and promotional institutions surrounding it. There is lack of awareness and sector acknowledgement, hampering the design and facilitation of a quality based, market oriented and sustainable floricultural value chain.

Sector acknowledgement. The first thing one comes across when looking at Myanmar flower sector, is the lack of data, crucial for strategy formulation and planning of interventions. The importance of the floricultural sector and the income it provides, or should or could provide to millions of farmers, is overshadowed by straight forward food security contributing cash crops like rice, corn, beans and pulses. Indeed, food security and professionalising and expanding the production area of other horticultural crops like vegetables and fruits is important too, but the country overlooks the strategic importance of floriculture and the attractive income it can generate to rural communities when properly organised and facilitated.

Illegal border-trade. The Myanmar flower market has been disrupted by illegal border trade of flowers mainly from China. These flowers and bulbs, even rejects, from Kunming flower markets cross the border illegally and find Yangon wholesale market without having been subjected to any taxes or duties and without any phytosanitary papers. These products are sold below market prices and thus affecting the prices of local products and disposable income of farmers. This problem has only gotten worse over the last ten years and requires priority attention.

Knowledge poverty. In general, one can say that there is a structural lack of knowledge across the board. Especially on farm level, growers are isolated from crucial basic information pertaining to cultivation as well as post-harvest. To illustrate, production starts off on the wrong foot by either using inferior building blocks; growers mainly purchase local or Chinese low-quality seeds and bulbs, or multiply themselves, resulting in degeneration and higher disease and pest pressure. In addition, production practices are passed on from generation to generation without application of new practices and insights or the use of suitable and sustainable fertilizers, pesticides and herbicides. Agro-chemicals are often applied by workers without any form of protection, resulting in skin diseases, respiratory diseases and even cancer. Growers and their workers are ill informed as to when, how much and how to apply. Skilled labour is scarce.

There is little protected flower cultivation in the form of low-tech greenhouses or (shading) covers. With the low and uncertain outputs, as well as the relative small-scale operations of growers, credit providers do not stand in line to fund floricultural improvement or expansion projects. Again, a lack of awareness and thus appreciation of the sector, but also lack of collateral and organisation of farmers.

Between a rock and a hard place. Interviewed growers, though smart, dedicated and driven, were all highly dependent on the traders buying and selling(!) their flowers. Only when the trader has sold all flowers at whatever price, the producer would be paid. Many growers don't know the price they will fetch until the flowers are sold. For chrysanthemum growers, one out of three transactions are at a loss. Many growers also rely on traders in obtaining agro-chemicals and credits at exorbitant interest rates. High dependency, lack of knowledge, low income, and being disconnected from the market, results in low production and low product quality and therefore also no perspective of securing credits to grow or improve their business operations. There is little cooperation between growers, and growers in general maintain a perceived distrust towards government imposed cooperatives.

Road to market. After harvest, flowers suffer from poor handling and no cooling facilities or reefer trucks. Apart from a thriving orchid market, the cut flower market is dominated by chrysanthemum, followed by rose, lilium, aster and gladiolus. Overall quality is low, main colours are red, white, yellow and orange. There is a need for quality improvement of existing flowers and the introduction of new varieties of many types of cut flowers and bedding plants. Myanmar wishes to export floricultural products, also to the EU.

In general, one can say, there is a direct need for (i) institutional capacity building, (ii) sector statistics, (iii) organisation of growers, (iv) practical knowledge on production and post-harvest, (v) a lack of quality and variety of planting material (bulbs, seeds, cuttings), and (vi) (low-mid tech) cultivation and cooling/cold storage technology.

4.2 Main opportunities for Dutch companies

The Ministry of Agriculture, Livestock and Irrigation Permanent Secretary stressed at different occasions the sincere wish to intensify the cooperation between the Netherlands and Myanmar, so as to boost professionalisation and growth of the floricultural sector in Myanmar.

Export. The main opportunities for Dutch companies aiming to conduct or expand their business with Myanmar are:

- Export of **'Hardware'**: (i) Quality bulbs, seeds and cuttings, (ii) Introduction of 'new' varieties cut flowers and bedding plants, (iii) Low and mid tech greenhouses and shading structures, (iv) Farm equipment, agro-inputs/IPM, materials and machinery, (v) Any low-cost irrigation and water saving tools, (vi) Cold storage solutions, (vii) Reefers and cooled transport equipment, and (ix) Mobile technology / applications.
- Export of **'Software'**: (i) Organisation of growers, cooperative development, (ii) Training of growers on good agricultural practices in all fields, (iii) Institutional strengthening, capacity building, training of trainers/extensionists, officers, staff of government, educational and research institutes, and (iv) Market research, data collection, floricultural statistics.

Especially 'hardware' exporting companies should bear in mind that sales through sales will not work; Sales through support will. This means not illustrating, but demonstrating the added value of the products offered and providing the necessary support to make sure that the products are applied or used in the rightful manner… A hands-on approach dictating multiple personal after-sale visits.

Invest. Looking at similar markets like Vietnam (example Da Lat area) and the steep development curve they experienced, investing in Myanmar, offers, when diligently approached, a big opportunity for companies to invest in e.g. flower production operations. Working with and through a Burmese partner in for instance a Joint Venture company where each of the parties hold shares in the JV. Crucial is to select the right partner, i.e. complementary in what expertise, networks and knowledge it brings in, trustworthy, transparent and compatible with a shared vision. Labour is widely available and Burmese are in general eager to learn the required skills. Contract farming is also a way to develop a reasonably sized operation without hectares of land acquisition. When set up in a socially responsible and respectful manner, the contracted farmers benefit from assured market access for the set quality, have access to the several agro-inputs and enjoy training to meet the quality standards of the investor. The investor in turn can maintain focus on adequate post-harvest infrastructure and marketing. Florists and 4 and 5-star hotels form an ever-growing attractive market with a general appreciation for higher quality. Developing flori-tourism is areas like Pyin Oo Lwin district or near Heho highlands can provide for additional incentive and revenues, whilst encouraging local hospitality entrepreneurship.

Import. Dutch companies may well wish to investigate further the opportunity to source products from Myanmar. Whether these are orchids (mainly Dendrobium spp.), heliconia, anthurium or other local flowers, foliage, young bamboo, decorative products or otherwise labour intensive or local products. Further research has to be conducted to identify specific local products with export potential to EU/the Netherlands.

The different need areas and opportunities for Dutch business and institutes in floriculture to cooperate or deliver products and extend services are depicted in below figure 8.

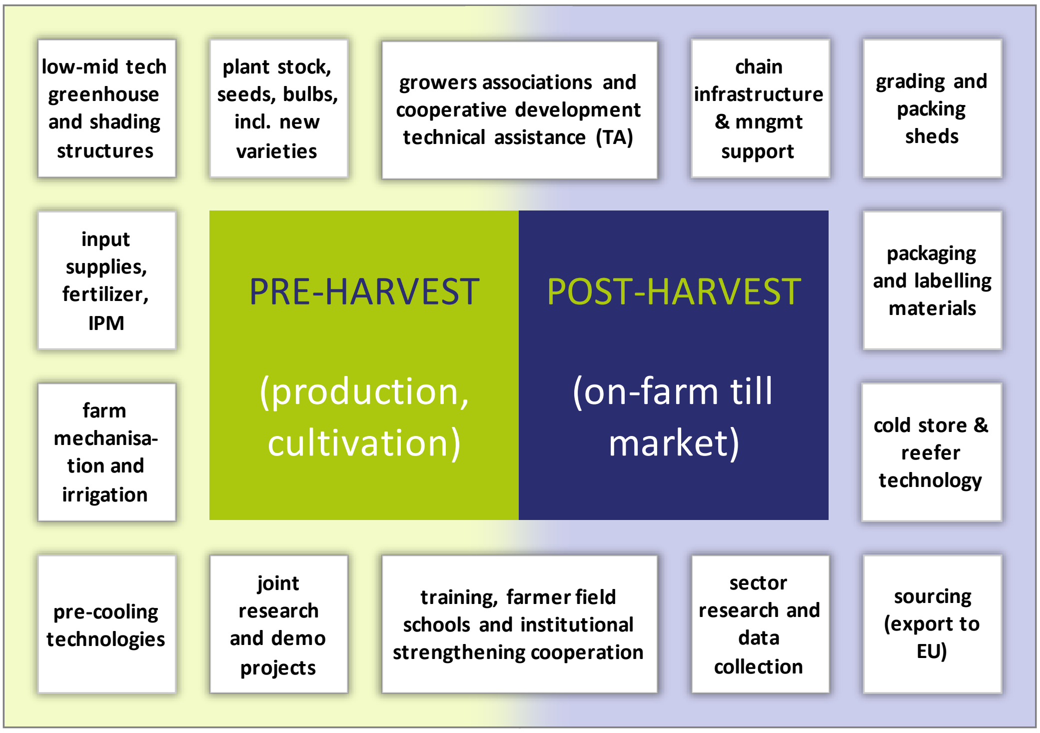

Figure 8.: Areas of bilateral opportunities

4.3 Import procedures

Import permit. In order for Myanmar based companies to import for instance Dutch plant material, they have to apply for an import permit. The procedure is not very cumbersome, yet requires the necessary steps to follow and patience from the applicant. The regular permit and application for recommendation letter is to be submitted with the Plant Protection Division (PPD, www.ppdmyanmar.org) and takes some 2-4 weeks. Documents needed are: Company Data, Sales Contract, Invoice, Packing List.

For new varieties, the applicant has to wait for approval from the National Seed Committee. This can take anywhere from a few weeks to several months.

Upon obtaining the approval from the National Seed Committee, you have to apply for the import permit at the Ministry of Trade and Commerce. Together with the recommendation letter from PPD, and with the same documents above, you must apply the import permit.

Currently only local companies and Joint Ventures can be enrolled in international trading activities. For joint ventures, a maximum of 49% foreign share is allowed. Foreign companies are allowed to be in production and other related services.

Customs. Clearing of shipments in Myanmar involves checking of the required documentation including the phyto-sanitary certificate and country of origin. Based on this, taxation will be calculated. Most of the agricultural related products are subject to around 2% tax, yet some exceptions prevail. An excerpt of the Myanmar Customs tariffs of October 2017 is attached to this report in annex D. The customs tariffs are According to customs data, the first two containers of flower bulbs from the Netherlands as imported in 2017, were subject to 22% import duties. As this was the first shipment from the Netherlands.

Upon payment of the required taxes and duties, the containers can be released from the port. Documents needed are: custom files, tax payment slips, Bill of Lading, Invoice and Packing List. At the port, customs officers scan the container(s) or from time to time unload the container and check the goods with the invoice and packing lists. This might take up to one day.

The 2nd National Seed Platform meeting as held last November in Nay Pyi Daw resulted in government awareness to include flower bulbs, seeds and tubers in the Seed Law, resulting in a 15% tax deduction of the first imported shipment. Import duties for plant material are therefore at 7%.

4.4 Main risks for Dutch companies

Though Myanmar floricultural sector offers a wide range of opportunities at the brink of 'take-off', one should be aware of the risks that come with being an early entrant in emerging developing markets like Myanmar. Ambition maybe there, but the physical, governing and financial infrastructure is not in-sync with the international trade or foreign investments it takes to boost sector development. Surrounding yourself with trustworthy knowledgeable Burmese relations is a prerequisite to circumvent and mitigate the cumbersome bureaucratic legal and regulatory hurdles and in-transparency risks.

The current Rakhine issue has drawn wide international media attention. Though this issue is related to one smaller Western border area only, it may -in the worst case- result in trade sanctions from the international community. Though main market Yangon and current capital

Nay Pyi Taw are at distance of the crisis area, an act of terrorism cannot be guaranteed not to take place. However, terrorism risk currently exists in all parts of the world without disparity.

For Dutch exporting companies, make sure that your potential buyer has secured the necessary import permits and is aware of the relevant fiscal consequences, and customs and clearing procedures. Annex C displays the NVWA export requirements for floriculture-Myanmar (in Dutch).

When exporting bulbs, seeds or cuttings, make sure that you have a variety protection strategy worked out to protect your IP (intellectual property). It makes sense to enter the market with restricted sales within reasonable span of control. This, not only to protect the product from illegal multiplication, but also to provide related training on storage, planting and cultivation. This will allow the Burmese growers to fully enjoy the potential of their investment in high quality Dutch planting material, and thus re-order.

It is advised for Dutch businesses and institutes when entering into Myanmar market or aim to develop projects to study the market and competitive environment, and conduct a risk assessment, to identify risks, and rate their probability (rare till almost certain) and severity/impact (negligible till catastrophic), so as to be aware and effectively mitigate the identified risks. These risks may be anywhere from political, economic, socio-cultural, technological, legal and/or ecological in nature.

5 Conclusions and recommendations

The Myanmar floricultural sector has tremendous potential. The home market is large in size, its individual end consumers have a big heart for flowers and because of its predominant Buddhist society, the use per capita of flowers for daily offerings and ceremonies is least to say impressive. Looking at neighbouring markets like China, Vietnam and Thailand, that underwent robust floricultural sector development over the last decades, it is only a matter of (short) time for Myanmar to follow in their footsteps. And, when exploiting the full potential of its climatologic conditions, geo-diversity and motivated workforce, Myanmar can in theory, become the regional flower garden, furnishing its home market as well as export markets in the region and beyond. Economic spin-off advantages can also be found in synergies with other sectors, like the tourism industry.

However much the potential is there, some serious work has to be done to professionalise the sector. There is a chronic information poverty, growers operate on 'islands' and lack the required knowledge to grow and prosper, sector data are unavailable, the sector not adequately regulated and not transparent in any way.

Myanmar government role. Without beating around the bush; Myanmar floricultural sector is hampered in its development by insufficient attention, border control and enforcement, transparency, access to credit, variety protection and incentives. For the floricultural sector to flourish, it is a prerequisite that the Myanmar government actively facilitates the professionalisation trajectory based on a thought-out strategy. The different relevant institutions, such as the Ministry of Agriculture, Livestock and Irrigation, the Ministry of Border Affairs and Directorate of Trade, should coordinate and collectively provide a conducive and environment for Myanmar floricultural growers, broader sector, foreign exporters and investors and other key-actors. Re-shaping a just playing field starts with the support of (i) collecting of sector data and compiling of statistics, (ii) information provision throughout the sector, (iii) growers' empowerment through (self-initiated) organisation, (iv) access to (affordable) credit, (v) research, demonstration and training, as well as (vi) minimised red-tape, maximised transparency and incentives for foreign investment and trade. It only makes sense that Yezin Agricultural University, the Department of Agricultural research and the relevant State Agricultural Institutes, should be actively involved in the generation and dissemination of knowledge to growers. Demonstration plots at agricultural institutes should be aligned with the prevailing or adjusted curriculum and be used primarily for knowledge generation and dissemination purposes; any income generated from harvested flowers are to be considered a bonus. Though, first floriculture should be recognised as a justified horticultural column which offers many contributions to Myanmar, such as (i) rural development and income generation to smallholders, (ii) providing income opportunities for growers input suppliers and traders, (iii) offers symbiotic horti-tourism opportunities, and (iv) contributes to national religious and social prosperity fostering aspirations. So, where a focus on food security, including structural support and Central Dry Zone (CDZ) development in relation to rice, beans and pulses is justified, floriculture needs to be recognised as a horticultural contributor to the economy and welfare of Myanmar and its people.

Dutch companies and institutions role. Dutch businesses can play a vital role in Myanmar floricultural sector reform. The export of agro-inputs, like flower bulbs and seeds, fertilizers, biological control and plant health solutions, tools for flower cultivation and post-harvest, low-to mid-tech greenhouse and shading structures, (irrigation) equipment, cold store technologies, to name a few, can make a huge difference. Dutch companies need to bear in mind that Myanmar is requires a long-term commitment and plain export of products, will not work. Products should be accompanied with the necessary after-sale service, not in the least in the form of providing on-site guidance and training in order for the Myanmar client to enjoy return on his or her investment or purchase. When, where, how to apply your product needs to be very clear, not only in writing in Burmese, but more so by demonstration of the Dutch company or the local agent or distributor. Dutch companies should be prepared that sales will I nearly all cases only occur when the product claim has been demonstrated, not illustrated. A partner approach, possibly even packaged as project or study with Dutch government support, gives the Dutch company more insight with lower risk and more chance of success to do business with Myanmar. It is advised to contact RVO, The Hague, for valuable suggestions and advice, as well as to enquire for applicable instruments and subsidies for emerging developing markets like Myanmar so as to mitigate risks and support effective preparation (for RVO contact details, see also annex B).

Investing in Myanmar. The floricultural sector provides a good opportunity for Dutch companies to invest in setting up activities in Myanmar. Entering into a joint venture with a local reputable company may well be advantageous to tackle the bureaucratic, legal, intercultural, linguistic and labour challenges entering a market like Myanmar presents. An additional advantage is that usually well-established local firms/investors have a strong network with government and private sector key actors, which is of significant help when setting up new projects. Given the current weak chain infrastructure, it seems advisable when investing in professional flower production, to also secure maximum control over marketing processes. Direct linkages with retail and/or service industry or opening your own retail outlet will provide more market insight as well. Again, RVO can provide more information on suitable support instruments.

Possible other initiatives. Penetration of mobile devices in rural areas in Myanmar in bigger than in any of its neighbouring countries (mobile penetration was 85% in 2016; smartphone adoption 70% - global average 49%[15]). Providing large numbers of smallholders with real-time information is necessary, especially since most of them are not organised in the form of a cooperative and as such not easily reachable. The info provided can be anything from severe weather and disaster early warning systems via push messages to cultivation, IPM and market information. Programs for application development have to be initiated or flower grower relevant tools should be integrated with currently developed applications for farmers, such as those granted under the satellite based food security program G4AW or otherwise. Though these tools would be supportive to growers, extensive practical training remains paramount. This also includes training of researchers, lecturers and extension officers.

It is advised to attract, assign and train a new breed of flower cultivation extensionists to train, guide and support growers and introduce new or improved technologies, inputs and varieties in conjunction with Yezin Agricultural University, Department of Agricultural Research and the relevant State Agricultural Institutes. Dutch knowledge institutes, advisory firms and NGOs can develop and implement capacity building programs in collaboration with the relevant Myanmar institutions.

[15] Netherlands Space Office (NSO), AgriProFocus, 2016, Quick Scan Myanmar for G4AW

Regional dynamics. Only recently three Chinese flower bulb importers were arrested in Yunnan Province, China for alleged fraud and tax evasion. The three importers collectively serve some 60% of the Chinese market. Their bank accounts were frozen and as such could not pay for the Dutch shipments with (more than 150 containers with Lilium bulbs). As the bulbs had to be planted to yield flowers for the Chinese New Year, received planting material was possibly sold to other buyers to at least redeem some of the losses whilst allowing China to have Lilies available for their upcoming Chinese New Year as celebrated Mid-February 2018. Illegal Lilium imports from China to Myanmar disrupts Myanmar market. The impact for Myanmar will most probably be positive for the next coming months, as China will focus to meet their local demand and as such less illegal border trade is expected. Now is the time for the Netherlands to focus on Myanmar by providing quality planting material accompanied with training on product handling storage, cultivation and good (post) harvest practices.

Final remarks. Myanmar floricultural sector has its fair share of challenges and issues to bridge the gap from a traditional flower sector to a market driven professional value chain. The potential is enormous, and once awareness is there, willingness to act will follow. Given, is that a broad support structure has to be in place to overcome the lack of information, knowledge and cooperation. The Netherlands is like no other country used to and capable of entering into a long term strategic cooperation with Myanmar to assist in elevating the sector.

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