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| **Title** | **Increasing University production capacity for COVID-19 prevention equipment** |
| **Document Language** | English |
| **Responsible Unit** |  |
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| **Subject (Taxonomy)** |  |
| **Date approved** |  |
| **Audience** | Senior Management Team, DIAT, Programmes Team |
| **Applicability** | *Initiating a Project* process to test feasibility and scalability so as design a complete project on university production processes |
| **Replaces** | Initiation Plan template in the UNDP User Guide.  The purpose of this update is to simplify the previous template and clarify specific requirements related to monitoring, risks management and management arrangements. |
| **Is part of** | UNDP Programme & Operations Policies and Procedures – [Project Management section](http://content.undp.org/go/userguide/results/project) |
| **Conforms to** | Harmonized programming procedures and ATLAS |
| **Related documents** | [Initiation Plan – Deliverable Description](http://content.undp.org/go/prescriptive/Project-Management---Prescriptive-Content-Documents/download/?d_id=1352124)  UNDP Programme & Operations Policies and Procedures – [Defining a Project](http://content.undp.org/go/userguide/results/project/defining) |
| **Document Location** | Management Practice Document Repository - [Project Management](http://content.undp.org/go/prescriptive/Project-Management---Prescriptive-Content-Documents/) - Defining – Deliverables |

**Please refer to the Deliverable Description mentioned above for guidance regarding the purpose and use of this template**

**United Nations Development Programme**undp3

**Country: \_\_\_\_\_\_Malawi\_\_\_\_\_\_\_\_\_**

**Initiation Plan**

**Project Title:**

Increasing University production capacity for COVID-19 prevention equipment

**Expected CP Outcome(s): Not applicable**

**Expected Project Outputs:**

***Output 1:*** *Project support document for strengthening of university capacity to produce PPEs.*

***Output 2:*** *Selected Universities enabled to increase PPEs to meet priority demand*

***Output 3:*** *Strategy for identification of targeted beneficiaries and PPE distribution in place*

**Initiation Plan Start Date:** 1st October 2020

**Initiation Plan End Date:**

**Implementing Partner:** CHANCO, POLY, MUST, LUANAR, MZUNI, COM, MoH

Total resources required:

Total allocated resources: \_\_\_\_\_\_\_\_\_

* Regular \_\_\_\_\_\_\_\_\_
* Other:
  + Donor \_\_\_\_\_\_\_\_\_
  + Donor \_\_\_\_\_\_\_\_\_
  + Donor \_\_\_\_\_\_\_\_\_
  + Government \_\_\_\_\_\_\_\_\_

Unfunded budget: \_\_\_\_\_\_\_\_\_

In-kind Contributions \_\_\_\_\_\_\_\_\_

Programme Period:

CPAP Programme Component: \_\_\_\_\_\_\_\_\_\_\_\_\_\_

Atlas Award ID: \_\_\_\_\_\_\_\_\_\_\_\_\_\_

PAC Meeting Date \_\_\_\_\_\_\_\_\_\_\_\_\_\_

Agreed by UNDP:

**Brief Description**

**Situation**

The COVID-19 pandemic is a threat to the health outcomes of Malawians, due to an already fragile health system, lack of adequate medicines, medical supplies and a shortage of health workers. There are efforts from the Ministry of Health (MoH) to strengthen the health system as a response to this outbreak by training more health workers and developing protocols for the safe diagnosis and management of COVID-19 cases. However, there remains the challenge of having adequate medical supplies to meet the needs of the country. A shortage in these supplies especially PPEs for health workers creates a high risk to exposure for health workers. Shortages also hinder the ability of the health system to identify and isolate positive cases of the virus to stem the spread of the virus to the population. The scarcity and high competition for these products on the international market coupled with a lack of appetite for local manufacturing companies to repurpose machinery and produce these products at scale calls for investing in more innovative systems of production in order to meet the needs of the country.

Recently in a bid to contain the spread of the virus, the Malawi government commenced mandatory use of face masks in all government institutions[[1]](#footnote-1). Ministry of Health has also recommended for MANDATORY cloth face mask use in areas where local transmission is high and where physical distancing is not possible[[2]](#footnote-2). Following this directive other service providers like banking and shopping malls are also encouraging their customers to wear masks. This has resulted into situations where people are lending each other masks to access services. We expect that mandatory use of facemasks in public spaces will continue as one strategy to contain disease spread in the country.

**Response**

The UNDP has engaged institutions including the Malawi University of Science and Technology (MUST), University of Malawi Polytechnic(POLY), Chancellor College (Chanco), Lilongwe University of Agriculture and Natural Resources (LUANAR), Mzuzu University (MZUNI) and College Medicine (COM) to support their initiatives for local production of COVID-19 prevention products. The Universities can produce a range of COVID-19 preventive products both to be used by health care providers in clinical settings and lay people in the community to prevent from COVID-19 spread. Among current products designs there are essential PPEs like face masks, face shields, safe handwashing equipment and alcohol-based hand sanitizers. Currently, these designs are being produced at small scale due to limited production capacity. For instance, face shields are being produced using laser cutting machines with limited production capacity (600 a day) against an estimated country need of about 100,000 face-shields for a 3-month period. Face masks are being produced at 1,000 per day using reusable, durable, washable (can be disinfected and sterilised using boiling water) polished and pre-shrunk 100% pure cotton with three layers and filtering inner mask for improved protection. Hand sanitizers are being produced at 2,500 per day using WHO guidelines. Foot operated handwashing stations are being fabricated at 5-10 per day depending on man hours. These designs, using locally available materials, have already gone into production at a small scale and are being supplied to various government organizations, health facilities and vulnerable populations. UNDP is partnering with Engineers Without Borders (EWB) to provide oversight and technical assistance to ensure products meet appropriate international standards and that efficacy and safety issues are addressed for all products produced by the universities.

University Production capacity assessment

The Accelerator Lab has conducted a production capacity due diligence in all the 6 academic institutions, namely: Chanco, MZUNI, POLY MUST, COM and LUANAR. The capacity assessment has shown the following:

1. **Equipment**

All the universities are converting their teaching spaces to produce relevant PPEs that can be used by the university, surrounding communities and vulnerable population groups. Some of the universities took the initiative to produce for internal campus use only until they realized the greater need in the country but were limited by their production equipment. Labs for chemistry, biology, physics have been converted into production spaces for hand sanitizers, disinfectants, and handwashing machines. The universities are using the same equipment used for teaching and prototyping hence the ability to produce the COVID-19 products albeit at a small scale. The Universities however need additional equipment to ramp up production particularly for products like handwashing machines, face shields and facemasks.

1. **Materials**

In order to produce these products, universities are procuring at small scale (on a need basis) relevant materials such as plastic to make face shields in local office equipment shops and furniture hardware shops. Materials that are not readily available in Malawi are being sourced on international markets and usually takes 2-3 weeks for the Universities to get these materials. For example, chemicals that assist in the production of testing reagents. With increased production capacity the universities can now source raw materials in bulk and on better terms to exploit economies of scale and reduce the unit costs of the products.

1. **Storage**

All universities have storage spaces for their products, in most institutions a room in the lab is designated for storing the products. However, other Institutions are aware that some of the products they are producing require off-site storage facilities due to the volatile nature of the product, for example ethanol based disinfectants. As such, some Universities are making strides in repurposing old buildings away from the other college facilities to serve as storage spaces. COM for example partnered with Central Medical Stores Trust to use the production and storage space of the trust.

1. **Human Resource**

The universities have their senior leadership (at College Principal level) supporting the initiatives such that there is envisaged sustainability going forward. Senior Academic personnel provides necessary technical guidance of the operations with qualified technicians working on the ground daily. For some universities, mass production may require additional personnel at the technician level to accelerate production. . There is no risk when it comes to get additional personnel as the Universities work with students and interns as part of production workforce. Necessary COVID-19 precautions are incorporated in the production spaces/facilities. In addition, the production model is run in a way that additional personnel cost can be absorbed by the additional production levels hence no risk of cash shortfalls.

1. **Quality Control**

Some of the products like Hand-sanitizers have already been certified by Malawi Bureau of Standards while some products may require a month or so to get a quality regulation framework that can certify them. For products like face-shields, personnel from MoH have appreciated their efficacy although there has not been a formal certification or approval.

**Rationale of approach**

Universities are traditionally considered institutions of conducting research and educating future academics, professionals, leaders and innovators. In addition to its traditional educational role (first generation), its second mission of conducting scientific research (and basing its education on such research), and the expanding third mission of creating value by helping start-ups and initiating market innovations. University are now getting into the space of “Fourth Generation University”, now called upon to interact, co-create and achieve a far-reaching impact on regional, national and global development. In the wake of COVID-19 and a disinclined private sector, Universities in Malawi are repurposing their machinery for prototyping to produce PPEs for use in their institutions as well as community groups they work with. For example, MZUNI , the only public university in the north is producing certified alcohol-based hand sanitizer and distributing to health facilities, prisons and vulnerable communities in the region. The POLY and MUST in the South are producing face shields and selling to surrounding health facilities and organizations at low costs. LUANAR and Chanco in the central is producing reagents for Viral Collection, Transportation and Storage Fluid which is what frontline health workers use when collecting COVID-19 samples from suspected individuals. These initiatives are an indication that the Universities could expand their services especially in these times where all efforts need to be diversified for lives to be saved thereby contributing to filling the gap that the MoH and Malawi Government is facing in addressing the pandemic. In addition, the Universities have potential to spin-off some of their innovations into private ventures that are run sustainably post support.

# Purpose

The purpose of the Initiation plan is;

1. To finalize preparation of a project document. The plan will provide resources to ensure that details of investment in each university are identified and appraised, adequate information is collected on markets and beneficiary characteristics for a sustained production capacity are unraveled, agreements on terms for university participation are secured, etc.
2. To allow urgent initial production of PPEs for immediate distribution to priority targeted beneficiaries;
3. Establishment of quality assurance mechanisms for PPEs
4. To put together a strategy for identification and distribution of PPEs to priority targeted beneficiaries.

# Expected Output (S)

* Output 1: Project support document for strengthening of university capacity to produce PPEs.
* Output 2: Selected Universities enabled to increase PPEs to meet priority demand.
* Output 3:Strategy for beneficiary identification and PPE distribution in place.

# Management Arrangements

The project shall be supported by a coordinator contracted by UNDP for a short period of time to coordinate the 6 Universities outputs into development of a project document. Each University engaged in the project through the Univeristy coordination Team (IC-Team) shall identify a focal person responsible for articulating the University’s outputs in the project document. The coordinator will be responsible for consolidating all university outputs into one project document.

UNDP shall from time to time convene meetings with Ministry of health (MoH) representatives and university focal persons to discuss expected outputs so that each university intended outputs are in line with the broader project objectives as well as the ministry of health needs.

At the onset of the project, an advisory board comprising of a representative from ministry of health, pharmarcy, medicines and poisons board, Malawi bureau of standards, national science of commission and technology and ministry of industry shall engage with University focal points to ensure outputs are aligned to recommended or approved national/international product specifications and quality control modalities.

**Focal Point**

* Accelerator Lab

**Ministries, Departments and Agents (MDAs):**

* Ministry of Health
* NPC
* Ministry of Industry

**Development Partners**

* UNICEF
* WFP

**Academia:**

* Malawi University of Science and Technology (MUST),
* Chancellor College,
* The Malawi Polytechnic,
* Lilongwe University of Agriculture and Natural Resources (LUANAR),
* Mzuzu University
* College of Medicine

Other Partners

* Malawi Bureau of Standards
* Engineers Without Borders
* Pharmacy medicines and poisons board of Malawi

**Project Governance Arrangements**

Advisory Board

UNDP

PMPB

MBS

Innovation coordination Team (IC-Team)

CHANCO

POLY

MUST

LUANAR

MZUNI

COM

**Innovation coordination Team (IC-Team)**

**Project Steering Committee**

**UNDP**

**Accelerator Lab**

**Ministry of Health (MoH)**

**Project implementation structure**

**Project advisory board**

# Monitoring

The project will adopt current UNDP tools for monitoring and reporting project performance during implementation. The tools allow monitoring of delivery of inputs, finances, implementation of activities, project management actions and achievement of results at different levels.

The UNDP Programme Analyst responsible for the project, will submit quarterly reports which will provide a basis for monitoring progress. The reports will provide the status of implementation of activities listed in the project annual work plan. UNDP will convene quarterly project management meetings involving all universities participating in the project to review the performance of the project and resolve issues.

A steering committee of the project will meet at least once a year to review overall progress towards to the achievement of key deliverables, among other roles. The advisory board will meet quarterly or on a need basis to review progress and troubleshoot bottelenecks of quality assuarance, product certification etc.

# ANNUAL WORK PLAN

**Year:**

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **EXPECTED OUTPUTS**  *And baseline, indicators including annual targets* | **PLANNED ACTIVITIES**  *List activity results and associated actions* | **TIMEFRAME** | | | | | | **RESPONSIBLE PARTY** | **PLANNED BUDGET** | | |
| Q1 | Q2 | Q3 | Q4 | Q5 | Q6 | Funding Source | Budget Description | Amount |
| ***Output 1: Project support document for strengthening of university capacity to produce PPEs.*** | 1-Commission and support project preparation/drafting exercise (engage universities to participate in process)  2-Organize consultation meetings with stakeholders to agree on project elements (output, indicators, partners, activities, risks, assumptions)  3-Complete a gender analysis for the project  4-Compile a SESP for the project  5- Consult selected project target beneficiaries on the project results and strategy  6- Organize project local appraisal committee meeting |  |  |  |  |  |  | UNDP |  | Local Consultant | 7,881 |
| **Output 2: Selected Universities enabled to increase PPEs to meet priority demand**  *Baseline: 500*  *Indicator 1.1: # of face shields produced by target universities on daily basis*  *Target value: 1000*  *Baseline: 10*  *Indicator 1.2: # of foot actuated handwashing devices produced by target universities on daily basis*  *Target value: 20*  *Baseline: 100*  *Indicator 1.3: # of medical face masks produced by target universities on daily basis*  *Target value: 2000*  *Baseline: 2400*  *Indicator 1.4: # of hand sanitizer produced by target universities on daily basis*  *Target value: 4800*  *Baseline:100*  *Indicator: 1.5 # of test reagents produced by target university on a weekly basis*  *Target value:200*  *Baseline:*  *Indicator 1.6 # of disinfectants produced by target university on a daily basis*  *Target Value:* | 1- Mobilise additional machinery/equipment and raw materials  2-Secure production and storage space  3-Mobilize additional technical expertise  4- Initiate the increased production of face shields, face masks, handwashing devices, test reagents and alcoholic hand rub  5. Integrate quality checks and control measures within and across Univerites  2. Secure national regulatory auhourities certification of products |  |  |  |  |  |  | Universities |  | Grants | 193,219 |
| **Output 3: Strategy for identification of targeted beneficiaries and PPE distribution in place**  Indicator: Criteria for identifying PPE beneficiaries adopted  Baseline: No  Target: Yes | 1. Develop and agree on criteria for selecting PPE beneficiaries  2. Map project beneficiaries (health centres and prisons/vulnerable) groups to benefit from the project  3. In collaboration with MoH and other partners working in the health sector, identify priority health centres/prisons and vulnerable groups in most vulnerable areas  4. Distribute PPEs to selected health centres, prisons and vulnerable groups  5. Monitor the adequate distribution of PPE material in collaboration with MoH |  |  |  |  |  |  | Universities, UNDP, MoH |  | Grants  Logistics | 29,189  10,000 |
| TOTAL |  |  |  |  |  |  |  |  |  |  | 251,200 |

1. <https://times.mw/government-for-mandatory-use-of-face-masks/> [↑](#footnote-ref-1)
2. Ministry of Health. "Updated Guidance on Mandatory Use of Cloth Face Masks By Community/Public." July 2020 [↑](#footnote-ref-2)