GOF PROJECT DEFINITIONS, SECTORS & METRICS

Definitions

SMME

- An SMME shall have the meaning as ascribed to the term 'small enterprise organisation' in The National Small Enterprise Act 102 of 1996 (as amended).

Green SMME

- Green SMMEs are defined as businesses that limit or prevent harm to the natural environment relative to conventional alternatives. The term 'green SMME' refers to the total governance of the business, which includes knowhow, procedures, goods and services, equipment as well as organisational and managerial procedures. In addition, green SMMEs:
    - Are less polluting and/or use all natural resources in a more sustainable manner and/or
    - Recycle more of their wastes and products and/or
    - Handle residual wastes in a more acceptable manner

Recognized Sectors

GOF recognises the following sectors for investment within the green economy:

- Green buildings and the built environment
- Sustainable transport and infrastructure
- Clean energy and energy efficiency
- Resource conservation and management
- Sustainable waste management practices
- Sustainable agriculture, food production and forestry
- Water management
- Sustainable consumption and production
- Environmental sustainability

Green Metrics Suite

GOF has a suite of 13 green metrics that are monitored and measured by the green SMME's that receive investment:

- Green Sector Direct Jobs
- Green Sector Indirect Jobs
- Soil Organic Carbon

- Synthetic chemical fertilizer reduction
- Persons reached by reliable clean energy grid/source that were without prior access to the transitional energy grid
- Energy generation – total installed capacity
- Energy efficiency – generic energy saved based on deemed savings value per unit installed
- Waste to landfill avoided
- Avoided waste incinerated
- Waste recycled/reused
- Chemical recovery
- Wastewater treated
- Water intensity

The table below lists the official suite of 13 green metrics that will be used by the Green Outcomes Fund to track and verify green outcomes that are generated by SMMEs invested in by Catalytic Finance Partners. Rationale for each metric and corresponding green technology examples are provided:

Green Metric	Units	Category	Green Sector	Metric Rationale	Green Tech Examples
Green sector direct jobs created	Number	Job Creation	All		
Green sector indirect jobs created	Number	Job Creation	All		
Soil Organic Carbon (SOC)	% C	Sustainable natural resource use (depends on what GOF categories will be)	Sustainable agriculture Resource conservation and management	• Soil organic carbon (SOC) is mostly used as a gauge or indicator of healthy, productive soils. Agricultural practices that retain and increase the amount of SOC in the soil provide the double benefit of improving sustainable productivity and assisting in the reduction of atmospheric greenhouse gas. Living soil biota also forms part of the total SOC (%C/sample) in lab tests.	• Regenerative Agriculture (reduced tillage and increased biodiversity creates healthier soil which enables greater amounts of carbon to be captured).
Synthetic chemical fertiliser reduction	Kg Co2-eq	Mitigation	Sustainable agriculture	• Synthetic chemical fertilizers and pesticides releases significant amounts of greenhouses gases, especially nitrogen, which is the largest contributor to GHG in agriculture. Reducing synthetic fertilizer and pesticide usage improves the long-term health of the soil, while also reducing carbon emissions from agriculture.	• Regenerative Agriculture (reduced tillage and increased biodiversity reduces dependency on fertilizer and pesticide usage) • Organic and biodynamic farming • Biocontrol (using biological products as pesticide)

Persons reached by reliable clean energy grid/source that were without prior access to the traditional energy grid	Number of people	Access to Clean Energy	Energy	• Energy access or electricity access is central in addressing the major global challenges of the twenty- first century, including poverty, climate change, and famine. • 6 million households in South Africa remain without adequate electricity. • Between 40% and 50% of the households in South Africa are still defined as energy vulnerable and find it difficult to gain access to clean, safe, reliable and affordable energy they need to ensure dignified living conditions. • On average customers are spending between 20-30% of their monthly income on energy needs • 3.5 million (15%) households in South Africa are without grid connection. • More than 60% of rural households have no access to electricity. • Eight (8) year waiting period between an informal settlement getting tenure of the land and the formal electricity grid being installed.	• Home solar systems • Micro-grids • Energy Hubs • LPG gas • Innovative Energy Storage Facilities • Clean, modular and renewable energy systems

				• The backlog of electricity connections is projected to grow by 100,000 households per year for the foreseeable future. • Clean energy is a safer and healthier alternative • Metric refers and aligns with SDG 3, 7, 11 and 13 but impacts all other SDGs as well.	
Energy Generation - total installed capacity	MW	Generation	Energy	• In 2008, 2011, 2014 and again since late last year (2019) South Africans have, once again, been subjected to power cuts by the power utility, Eskom. • It is expected that loadshedding will continue for the next 3-5 years. • Eskom stated that of its total nominal capacity of around 44,000 MW, it was unable to provide around 13,000 MW of total capacity thereby resulting in the nationwide blackouts. • The quickest and most cost effective way to get new energy generation onto the national grid is through private sector participation.	• Hydropower • Solar photovoltaic • wind power • nuclear • Energy storage • LPG and LNG gas • Co-generation, biomass, biogas and landfill gas technologies.

				• The above-inflation electricity price rises; decreasing technology costs; supportive policies, regulations and tariffs; and innovative finance options have all played an important role in driving the growth of the renewable energy market. • Metric refers and aligns with SDG 7, 9 and 13 but impacts all other SDGs as well.	
Energy Efficiency - Generic energy saved based on deemed savings values per unit installed	kWe	Mitigation / Diversion	Energy	• Energy Efficiency. Energy efficiency simply means using less energy to perform the same task – that is, • eliminating energy waste. Energy efficiency brings a variety of benefits: reducing greenhouse gas emissions, reducing demand for energy imports, and lowering our costs on a household and economy- wide level. • South Africa has one of the highest energy intensity (ratio of energy used per unit of GDP) of any developing country. • Reduces expenditure on utility bills. • Reduces maintenance costs • Reduces CO2 emissions	• Lighting controls including timers and occupancy sensors • Variable Speed Drives (VSD) • Upgrades to Heating Ventilation Air- Conditioning and Cooling (HVAC) – Dampers, actuators and controls • Boiler upgrades / optimisation • Chiller replacements / optimisation • Voltage Regulation Units (VRUs) • Demand response management • Building Management Systems / BMS

				• Improves occupancy comfort • Increases asset value • Metric refers and aligns with SDG 7, 9 and 13 but impacts all other SDGs as well.	• optimisation • Building Automation • Building analytics software with programmable • rules and alerts • Building sealing • Water pumping and treatment • Smart Geyser controls • LED lighting • Energy Service Companies
Waste to landfill avoided	t	Mitigation / Diversion	Waste	• Diversion of waste from landfill unlocks landfill airspace and increase lifespan of landfills. This reduces liability to municipalities who manage landfills and who build very expensive and hard to locate landfills in the future. • Diverting organics from landfill also reduces methane (potent greenhouse gas) production potential linked to the anaerobic conditions of landfills, and also landfill leachate management / maintenance costs for municipalities.	• Actual recovery / extraction of materials (wet/food/organic and/or dry) for further value-add processing/recycling. Does not include companies/services that only transports mixed waste to another company to recover/extract high value materials. • Product refurbishment / remanufacturing. Examples include, but not limited: o Electronics refurbishment / remanufacturing; o Furniture refurbishment;
Avoided waste incinerated	t	Mitigation / Diversion	Waste	• Although incineration, with heat / energy extraction is regarded as a better alternative to landfilling, it results in the destruction of resource	

				that could be recycled at present or in the future. Furthermore, incineration has a low job creation / support potential than recycling value chains.	o Construction and demolition waste refurbishment remanufacturing.
Waste recycled / reused	t	Mitigation / Diversion	Waste	• The recycling of waste streams results in replacing virgin/finite resources that also have higher resource and ecological footprints than secondary materials, including climate change. • Replacing imported / foreign materials with local secondary materials reduces resource supply risk in times of geopolitical strife or economic crisis that affect exchange rates. • Furthermore, replacing imported resources with locally recycled secondary materials shifts jobs from foreign market to local markets. • Recycling value chains also have high job creation / livelihood support potential than disposal / incineration solutions.	• The processing of a waste material into a usable material / product as an input into production. Examples include, but not limited to: o Plastic recycler o Paper recycler o Cardboard recycler o Glass recycler o Metal recycler o Builders' rubble recycler • The physical processing of organic waste material into a usable material / product as an input into production. Examples include, but not limited to: o Composting o Biofuel production o Anaerobic Digestions with gas / energy recovery o Insect farming

Chemical recovery	t	Mitigation / Diversion	Waste	• Extracting chemicals is associated with extracting higher value from resources that would otherwise have been sent to landfill or been used in low value solutions. • Such extraction also requires further investments into high tech infrastructure and upskilling labour. • Furthermore, extracting chemicals locally, shifts jobs from foreign / imported economies to the local economy.	• Physical extraction of chemicals from waste streams. Examples include, but not limited to: o Pectin from citrus peels o Keratin from feathers o Sugars from wood waste o Calcium Tartrate from wine lees sludge
Water Intensity	m^3 of water consumed/product or service OR m^3 of water consumed/area of business premise m^3/unit, m^3/m, m^3/m^2, m^3/m^3, m^3/kg	Mitigation / Diversion	Water	• This is a water conservation and water demand management intervention that is meant to improve the business entity's (manufacturing, servicing and/or merchandising) water footprint and promote its drought resilience. This is practically a reduction in water consumption from a defined fresh water source (e.g. utility connection, groundwater or river) by a business entity to fulfil its standard/set operations, measurable through quantifying its products/services, i.e. a reduction in the ratio between water	• Investments in optimizing the production process to improve its water efficiency through retrofitting water efficient devices such as but not limited to aerators, smart meters, automated shut off valves and spray nozzles or in water treatment technologies that promote use of alternative water sources (reuse, ground, grey or rain water) such as but not limited to membrane filtration systems, biological, chemical, advanced oxidation

				intake and a defined unit of production.	systems or a combination of these. Ground water use must be compliant with legislation (NWA).
Wastewater treated	m^3 of treated wastewater / unit time m^3/d (MLD), m^3/year	Mitigation / Diversion	Water	• Improvement in the quality of the wastewater discharged to the environment or municipal sewer (must meet the stipulated discharge standards). This intervention will prevent and reduce the increased environmental pollution, aid in improving raw water quality, promote water reuse and ultimately reduce the cost of water treatment.	• Investments in wastewater treatment technologies that improve the quality of wastewater discharged such as but not limited to membrane filtration systems, biological, chemical, advanced oxidation systems or a combination of these.