I. Introduction:

Thirteen (13) Southern African Development Community (SADC) countries met on 6-7 June 2019 in Johannesburg, South Africa to discuss regional harmonisation of cleaner fuels and vehicle emission standards within the region.

The countries represented were Angola, DR Congo, Lesotho, Malawi, Mauritius, Mozambique, Namibia, Seychelles, South Africa, Swaziland, Tanzania, Zambia and Zimbabwe. In attendance were country representatives from both national and local governments, oil and vehicle industry, non-governmental organisations, and the academia.

The workshop was also attended by representatives of the SADC Secretariat, East African Community (EAC), UN Environment (UNEP), and International Council on Clean Transportation (ICCT).

The workshop was co-organised by the Air Pollution Information Network for Africa (APINA) through the Institute of Environmental Studies of Zimbabwe, UNEP and ICCT.

II. Background:

The transport sector is a major source of air pollution and CO2 emissions. These emissions are set to increase sharply as the global vehicle fleet is projected to grow to between 2 and 3 billion vehicles by 2050 – with the bulk of this growth taking place in developing and transitional countries. The sector remains the main source of urban air pollution in many developing and transitional countries, contributing to as much as 50% of urban air pollution in some cities. The key pollutant, for which transport is a major source, is small particulate matter (PM) that is estimated to cause approximately 4.2 million premature deaths annually. The smaller part of PM, black carbon, is an important climate pollutant (short-lived climate pollutant). Diesel engines account for 99% of black carbon from road transport.

To reduce PM emissions from vehicles there is an urgent need to introduce low-sulphur fuels – fuels with no more than 50 parts per million sulphur, and ideally 10 or 15 ppm. Low-sulphur fuels are necessary for the introduction and effective operation of cleaner vehicles and emission control technology. This combination of clean fuels and vehicles will have major health benefits and deliver substantial climate benefits from reduction of black carbon.

Two global programs have been promoting cleaner fuels and vehicles in developing countries, and Africa in specific. These are:
- the Partnership for Clean Fuels and Vehicles (PCFV) https://www.unenvironment.org/explore-topics/transport/what-we-do/partnership-clean-fuels-and-vehicles, and
the Climate and Clean Air Coalition (CCAC) [http://ccacoalition.org/en/initiatives/heavy-duty-vehicles](http://ccacoalition.org/en/initiatives/heavy-duty-vehicles). In 2016, the Heavy-duty Diesel Vehicles Initiative of the CCAC released “A Global Strategy to Introduce Low-sulfur Fuels and Cleaner Diesel Vehicles” (Global Strategy), whose goal is for most countries to achieve 50-ppm sulphur fuels by 2020, all countries to reach this level by 2025 and most countries to reach 10-ppm fuels by 2030. The environmental and health benefits of cleaner fuels and vehicles are substantial, eliminating an expected 14 million metric tons of PM cumulatively through 2050 and up to 500,000 fewer premature deaths a year in 2050.

III. Progress to-date:

Fourteen (14) countries in Africa have adopted low sulphur fuels (50 parts per million -ppm) fuels and below. These are Morocco, Ghana, Kenya, Uganda, Tanzania, Rwanda, Burundi, Mauritius, Mozambique, Malawi, Zimbabwe, Namibia, Eswatini and Lesotho.

**East Africa:** The East Africa region has made significant progress to move to low sulphur fuels as a sub-region. In June 2013, a Ministerial decision to adopt low sulphur harmonized standards (50 ppm diesel and 150 ppm petrol) was approved and gazetted in December 2013 for implementation by 1 January 2015. The region is currently in the process of revising the standards to tighten the sulphur levels in petrol fuels (50 ppm) and other parameters.

**West Africa:** The Economic Community of West African States (ECOWAS) held its first regional meeting towards establishing regionally harmonized fuel and vehicle emission standards in December 2018. Regionally harmonised low sulphur fuels standards (50 ppm) and vehicle emission standards (Euro 4/IV) will be presented to Ministers in July 2019 for consideration.

**Southern Africa:** Seven countries in the region - Malawi, Mauritius, Mozambique, Zimbabwe, Namibia, Eswatini and Lesotho. (Zambia are in transition) – have adopted 50ppm sulphur fuels, with some countries introducing 50 ppm fuels in major towns. There is need to harmonise fuel standards due to intra-regional trade. This workshop builds upon past meetings to discuss better air quality through cleaner fuels and vehicles and in particular the following:

- Regional technical and Ministerial meetings organised by the SADC Secretariat;
- Regional meetings held in Botswana, and Johannesburg to discuss cleaner fuels and vehicles organised by UN Environment;
- Sub-regional meeting held in Maputo, Mozambique on harmonisation of fuel standards for Mozambique, Malawi and Zimbabwe;
- National activities to promote cleaner fuels and vehicle emission standards in Malawi, Mauritius, Zimbabwe, Mozambique and Botswana.
IV. **Recommendation:**

1. **Clean Fuels**

1.1 To reduce sulphur levels in fuels to 50 ppm and below by end 2022 to 2025 for all countries (importing and refining);

1.2 Development of a refinery investment plan (between Government and Private Sector) by end of 2020 for refining countries;

1.3 To reduce sulphur levels in fuels to 10 ppm and below from 2025 to 2030 for all countries (importing and refining);

1.4 To harmonize fuel standards and practices in the region by end of 2022 through the coordination of the SADC Secretariat;

1.5 Enforce regulations against the procurement, sale and use of fuels not meeting the set standards by end of 2022;

1.6 Establish new and reinforce and expand capacity of existing fuel quality analysis laboratories by end of 2020.

2. **Clean Vehicles**

2.1 Development of legislation to require at least Euro 4/IV equivalent vehicle emission standards by 2022 for new and second-hand imported vehicles in line with improved fuel quality (Time frame for country implementation by 2024);

2.2 Review and harmonize the maximum age to 5 years for second-hand imported vehicles by 2024;

2.3 Review and harmonization of 2.2 should be coupled with best available technology;

2.4 Introduce fiscal incentives to promote importation and manufacturing of cleaner/soot free vehicles with respect to conventional vehicles;

2.5 Establish regionally harmonized vehicle emission standards by 2022 for the different categories of motor vehicles;

2.6 Develop the necessary country capacity to conduct inspection, enforce compliance and maintenance programs by 2025;

2.7 Establish periodic vehicle emission testing programs in major cities by 2025;

2.8 Conduct public awareness campaigns on cleaner vehicles and fuels.
2.9 Explore and adopt best available technologies that promote vehicle fuel efficiency and reduce emissions including diesel retrofits and low emission vehicles including motorcycles.

3. Cross cutting Issues

3.1 SADC Secretariat to conduct regional studies health impacts of transport emissions, fuel economy inventories and socio-economic analysis of promoting low and no emission transport for the region;
3.2 SADC Secretariat to facilitate a regionally harmonised data base for use in cost benefit analysis studies.