GREEN economy Indonesia

Background

Indonesia has one of the highest levels of air pollution in Southeast Asia. The primary source of these pollutants is the transport sector. In DKI Jakarta, the transport sector contributes between 30 and 40% of total particulate matter (PM) emissions. The overall costs of exposure to ambient PM reached 2.1% of GDP in Indonesia in 2017. In 2010, air pollution-related illnesses were estimated to have cost Jakarta up to US$4.2 billion, almost twice as much as the national budget of the Ministry of Health. There is growing awareness of the negative health impacts of air pollution caused by road transport in Indonesia. Governments from the national to the provincial and local level face increasing pressure to take action to limit harmful pollution and improve air quality in line with commitments, including under the Sustainable Development Goals (SDGs), in particular SDG3 (good health and wellbeing) and SDG 11 (sustainable cities).

Current policies to address air pollution from transport

In Indonesia, the Environment Management Act 41/1999 provides a framework for the control and management of air pollution. Various regulations and fiscal policies for air quality management are already in place including fuel taxes, support for electric vehicle (EV) manufacturers, odd-even congestion charging and public transport subsidies for low-income households.

Despite these measures, the enforcement of stringent standards and effective monitoring remain challenging due to limited monitoring and reporting capacities. For example, although the Ministry of Environment and Forestry (MoEF) reports on 129 monitoring stations for harmful pollutants, only 74 are active. There remains a need for more detailed, transparent and regular reporting of pollution concentrations. In addition, several regulations would benefit from better delineation of institutional responsibilities. For example, Act 28/2009 sets a minimum rate of 5% for all fuel taxes. The Act stipulates that provinces could extend the rate to 10%; however, the rate has been capped by the 2014 Presidential Decree. Moreover, local governments are entitled to 70% of revenues from the tax, but as earmarking is not permitted, it is unclear what portion of revenues from the fuel tax local governments receive and how this is spent.

Some efforts have been made to use fiscal incentives to lower transport emissions and air pollution such as the Low-Cost Green Car programme. However, to date, these measures have not achieved the emission reductions necessary to lead to health improvements for various reasons such as limited access to capital and lack of credible incentives for low-emission alternatives and clean technologies among others.

Reforming fiscal policies for better health outcomes

Several countries, provinces and cities already use fiscal policy instruments to tackle air pollution and adverse health impacts from the transport sector. Insights from these experiences suggest that a complementary package of measures comprising both revenue-raising instruments such as taxes and charges and spending/subsidy policies, alongside soft instruments, such as labelling and information, and regulations, including vehicle standards, is the most effective approach to address harmful emissions from the transport sector. Based on international experiences and the current policy framework in Indonesia and Jakarta, a 2019 UNEP Working Paper[1] sets out several green fiscal policy measures at the national and provincial level to reduce harmful emissions from the transport sector, which include the following:

1 UNEP (2019) Fiscal policies to address air pollution from road transport in cities and improve health - Insights from country experiences and lessons for Indonesia, Working Paper, December 2019.

UN environment programme

- **Differentiated sulphur excise duty** at the national level to help change behaviour and support the phase-out of harmful fuels. In its first year, such a measure is expected to raise US$1.6 billion and to bring about health cost savings of at least US$19 million. To maximise the impact of this measure, the diesel price subsidy should also be discontinued.
- **Low-tech congestion charging scheme** in Jakarta as an intermediate step to electronic road pricing. Such a scheme would entail differentiated charges for all vehicles entering the city-centre based on harmful emissions. The scheme could be implemented in a relatively short timeframe as vehicles would be required to display a non-transferable sticker on the basis of an honour system. A similar plakette scheme has contributed to reducing PM10 concentrations by up to 10% in certain German cities.
- **Gradual increase in fuel prices by provincial governments complemented by a national carbon tax** on transport fuels introduced at a rate of US$ 10/tCO2e, increasing to US$ 20/tCO2e within 10 years. Due to the progressive character of transport fuel taxes, distributional impacts are expected to be limited. Revenues from a national carbon tax (estimated at US$1,663 million) could be used for various purposes, including investment in public transport infrastructure, health, and development objectives.
- **Differentiated vehicle ownership taxes** levied on the purchase of new vehicles. One component of the tax could be based on emissions harmful to health and a further component on CO2 emissions, with high-emitting vehicles subject to a higher rate. The Norwegian example of differentiated registration charges has been lauded for drastically changing the nature of the vehicle fleet and bringing PM 2.5 levels down in polluted cities.
- **Subsidies for public transport tickets targeting poorer households and to support investment in public transport networks** can be used to help mitigate distributional impacts and continue to drive reductions in harmful emissions.
- **Subsidies for the conversion of heavy-duty vehicles to compressed natural gas (CNG)** or retrofitting to install particulate filters could, in the medium-term, help prevent job losses or bankruptcies among SMEs in the freight sector in the face of tighter emissions requirements. It is estimated that if 1% of freight vehicles in Jakarta took up the scheme it would cost US$18.9 million which could be funded through revenues from fuel taxes or the sale of stickers for the congestion charging scheme.

Way forward

Public awareness of the health impacts of air pollution is rising and there is an opportunity for decisive policy action to reduce emissions from transport in Jakarta and Indonesia. Carefully designed fiscal policy instruments such as differentiated sulphur duties, vehicle registration taxes and a congestion charging scheme in Jakarta could help reduce emissions and deliver health benefits. Revenues raised from such instruments can be used to subsidise alternative transport modes and invest in public transport in Jakarta to establish a viable alternative to private mobility, reduce congestion and traffic volumes in the city. Complementary measures are also required to address remaining challenges including a robust pollution reporting system incorporating warning mechanisms when concentrations exceed guideline values.

Strong political will is critical and consensus building within ministries and amongst the general public will be vital to successfully implement proposed measures. Stakeholder engagement processes could be supported by the creation of inter-ministerial working groups to foster possible options to address air pollution in the transport sector (and beyond) and the establishment of a green fiscal and health commission can create momentum to implement identified policy measures. A concerted effort to communicate the rationale underlying fiscal policy measures is also vital in this context. Communication strategies should emphasize the numerous co-benefits (which include reduced congestion, shorter journey times, improved air quality, better health outcomes, lower health-related costs; additional revenues to improve the transport system) and educate the public on the costs of poor air quality. This would feed into the current wave of awareness of the health impacts of pollution and help build a case for using fiscal policies to address air pollution and improve health outcomes for the people of Jakarta and Indonesia.

Layout at United Nations, Geneva – 2010505 **(E)** – August 2020 – 1 – **UNEP/RMB/ETPU/2020/9/iPub**