

**Report of The 6th Forum for South East Asia and  
The 11th Public and Private Joint Forum in Asian Region  
- The 25th ASIA GOVERNMENT/ INDUSTRY MEETING -**

**Day1: 26 January, 2021 16:00 - 19:00 (JST)**

**Day2: 27 January, 2021 17:00 - 19:00 (JST)**

**Meeting style: Zoom online meeting**

**Participant : Cambodia, China, Chinese Taipei, India, Japan, Malaysia, Myanmar, Pakistan, The Philippines, Republic of Korea, Singapore, Thailand, Vietnam**

**Special participants:**

- **Mr. Walter Nissler (Chief of Section, UN/WP.29 Secretary),**
- **Mr. Yves VAN DER STRAATEN (OICA Secretary General/Technical Director)**

**(Total 250)**

**[Day1:26<sup>th</sup> January 2021]**

**Moderator: Ms. Tanaka (JASIC),**

**Chairperson: Mr. Yodawara (JASIC members)**

**1.Opening Remarks (Mr. Takeshi Korenori, Director of International Affairs Office, Engineering and Environmental Policy Division, Road Transport Bureau, MLIT, Japan)**

The Public and Private Joint Forum has been held since 2010 with the start of the ASEAN-Japan New Cooperative Program. This is the 11th meeting. Former Asia Government/Industry Meeting has been held since 1998. Included this, this is the 25th meeting. Thanks to the many years of support and cooperation from Asian countries, we have been able to continue this meeting for such a long time.

Again, I would like to express my gratitude. As you know, traditionally, this forum has been held in Southeast Asian countries, hosted by the countries in turn. But unfortunately, this year, the forum is held online because of the COVID-19 pandemic. I am very sorry that I can't meet you in person. The world is being greatly affected by the coronavirus, and our lifestyle is about to change. We are actively using IT technology such as online meetings becoming more common. Similarly, in the last 10 years the world surrounding the automotive industry has changed drastically. Technological innovations related to so called case such as electricity, automation, connected and sharing have progressed rapidly. It is said to be one of a kind great changes during the past 100 years. It is expected that role and usage of vehicles in society will change in the near future, especially the development of automated driving technology has progressed rapidly. It has attracted a great deal of interest.

The realization of automated driving technology is also in solving various social issues such as securing means of transportation for the elderly in populated areas and improving productivity in the logistics field. Also, it is expected to reduce traffic accident.

In response to the evolution of vehicle technology, the regulations for vehicles must be evolved in order to ensure their safety. However, it is very difficult to establish regulations on increasingly complex and sophisticated automotive technology in each country. At the United Nations World Forum for Harmonization of Vehicle Regulations,

which is called WP.29, continues working – countries working together to establish regulations for the latest vehicle technologies. The safety regulations for automated driving system were considered at the WP.29 also. In collaboration with the United States, Europe, China et cetera, in June last year, the low speed ALKS which is used during traffic jams on the highway, a safety regulation has been established.

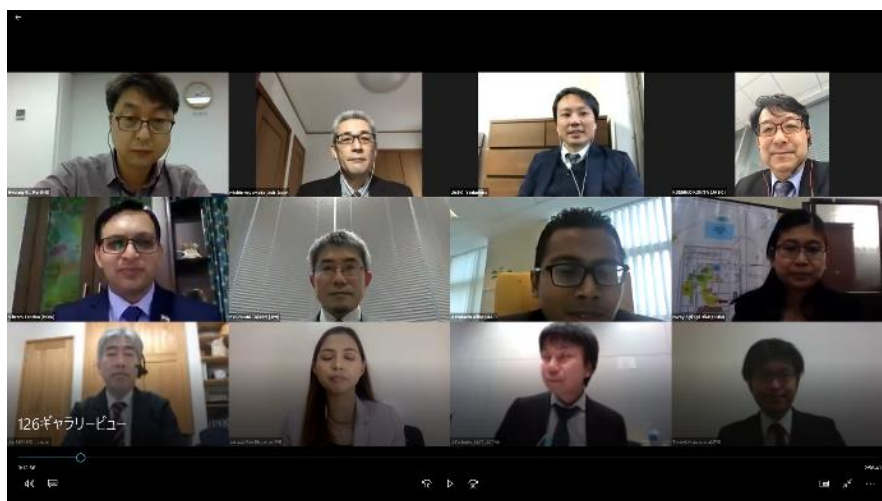
Japan will continue to collaborate with other countries to develop regulations for more advanced automated driving technology in order to achieve the goal of Japanese government in 2025, which is realized Level 4 automated driving vehicle ~~car~~ in highway.

Next, global warming is also a very important issue worldwide. In Japan, Prime Minister Suga declared in October last year that carbon neutral and a decarbonized society will be realized by 2050. About 15% of CO2 emission from Japan are emitted from vehicles. So, it is important to reduce carbon dioxide emissions from vehicles in order to achieve decarbonization. Prime Minister Suga stated that Japanese government would aim that percentage of electric vehicles in new vehicle sales would be 100% by 2035. Electric vehicles will include electric vehicles, fuel cell vehicles, and hybrid vehicles. Japan will actively work on electrification of vehicles.

I think that electrification of vehicles is an important policy goal for each country participating in this forum. We believe it is very important for Asian countries to work together to achieve this goal. This forum also includes as its agenda the WP.29 consideration status of regulations such as safety regulations for electric vehicles. I hope we can actively exchange information on it.

Finally, I do hope that we can further strengthen our cooperation through meaningful and active discussion in today's forum. I also hope that every country overcomes COVID-19 pandemic and all of you are in good health and we will be able to meet in person as soon as possible. Thank you.

## **2.Photo session**



## **3.Country report**

The representative of each country chose one from three theme and made a presentation.

Theme:

- Process of developing measures related to Vehicle Safety and Environmental Protection
- Procedure of Certification system (type approval system)
- National rulemaking procedures and implementation of established UN Regulations into national law

## **I. China:**

I want to introduce some backgrounds. As we know since the beginning of this century, China's vehicle production and sales have been growing dramatically. Since 2000, China has become the largest vehicle market in the world. It has been for 9 years in a row which caused this energy and environmental problems at the same time. The crude oil – external dependence is increasing year by year. How to deal with the contradiction between the development of vehicle industry and energy and environmental probably is related to the future competitiveness and sustainable development of vehicle industry. It has become an important issue for the managers and the standardization engineers of vehicle industry.

We know that energy saving is not only a technical topic but also a national strategic issue. A series of national planning and policy has made clear requirements for vehicle energy saving such as passenger vehicles reaching 4 liters per 100 kilometers in 2025, and commercial vehicles reaching the international advanced level, and the market share of new energy vehicles accounting for 20%.

As an important way to implement the national industry policy and strategy, the research and the formulation of vehicle energy saving standards has been highly concerned by the government and the vehicle industry.

Next one, I want to show the fuel economy standards system in China. This slide shows the whole system of the fuel economy standards. The research and development of China's vehicle fuel consumption standards started in 2001. Now, it has established a complete automotive energy saving standards system covering passenger vehicles, light duty commercial vehicles, and heavy-duty commercial vehicles, including test methods.

The energy saving standards of heavy commercial vehicles creatively proposed the test scheme of simulation, calculation, plus vehicle measurement. It provides an example for global energy saving management of heavy-duty commercial vehicles.

Next slide will show the development of different types of vehicles, the evolution of different types of vehicle standards. We know that in September 2004, the fuel consumption limit standards for passenger vehicle were issued. The fuel economy standard in China is implemented year by year and strengthen gradually. This is the first – we call this 2004 version Phase I and Phase II. In December 2011, China issued the CAFÉ standard which aims to implement the target of 6.9 liter per 100 kilometers by 2015. Since then, the individual vehicle limits plus enterprise average vehicle energy saving management system is established. We call this phase, Phase III. In order to meet the target of 5 liters per 100 kilometers average fuel consumption of passenger vehicles in 2020, the limit value and CAFE were revised and strengthened again in 2014. This is called Phase IV.

Currently, the Phase V fuel consumption standard is being revised and implemented which aims to achieve a target of 4 liters per 100 kilometers of passenger vehicles by 2025. The new CAFE has been officially released in December 2019. The index is determined based on WLTC conditions. Hence, the new limits standards will be released soon.

This slide shows the light duty commercial vehicles. China issued the fuel consumption limits for light duty commercial vehicles in July 2007, made the phase I and II limits requires M2 and M1 vehicles below 3.5 tons. The standard based on the fuel type gross vehicle weight and engine displacement to set different limits. In 2015, the phase III limit standard was issued, and the index was tightened by 20% on average.

At present, we are carrying out the pre-research of the phase IV standard. We're trying to further tighten the limit requirements according to the international situation and the pressure of the industry. We plan to release this standard in 2023. In the phase IV, the fuel consumption of test vehicle of light duty commercial vehicles will also be adjusted. But it's not yet determined whether to adjust from WLTC or CLTC. CLTC means China cycle.

This slide shows the heavy-duty commercial vehicles. In December 2011, China issued the phase I of fuel consumption limit standards for heavy duty commercial vehicles and assessed the fuel consumption of three types of vehicles such as freight trucks, semitrailer tractors, and bus based on the gross vehicle weight. In February 2014, the phase III limit standard was issued which strengthened 10% to 14% on the basis of the phase I and increased the fuel consumption limit requirements for city bus and dump trucks. In February 2018, we issued the phase III limit standard which we'll impose 12% to 16% on those five types of vehicles on the basis of the phase II limits.

At present, we are focusing the pre-research of phase IV standard, and plan to release the standard in 2023.

This one shows the label standard. The label standard was released in 2008 becoming the first technical standard in China to serve consumers. This standard specifies the content, the format, and the material, and the testing requirements of the label. In 2009, the MIIT published a notice that to require that all vehicles within the specified scope must be labeled. China vehicle fuel consumption website was officially opened in November 2011 to regulate public fuel consumption information. This standard was first released in 2017, extending the scope of the standard to new energy vehicles for the first time. In order to adapt to the change of test methods meets the needs of government's measurements and new information needs of industry and consumers.

Now, we are revising this label standard. This standard may be the new standard, may be will release next year.

This one is very unique because we are now considering the energy conversion of oil and electricity in order to assess energy consumption of the electric vehicles. In this standard we consider the different boundaries and conditions to value the different approaches. Those methods are in line with China's actual situation.

We provide three approaches. The first one is based on the conversion of heat value, that is from tank to wheel. The second one is considered the energy consumption upstream of power generation, that is from well to wheel. Third one is based on the CO2

emission. Those approaches will provide an important reference for the government in the future.

This slide shows a fraction of the implementation of the standard. We can see that fuel consumption of passenger vehicles dropped dramatically from 2007 to 2017 to 2018. They had decreased 20%. Implementation of vehicle energy saving standard has brought great economic and social benefits. It is estimated that by 2020 all kinds of vehicles will save 93 million tons of oil and reduce CO2 emission by about 300 million tons.

The last one is, we want to introduce the prospect, the future plan of the fuel economy standard research in the future. The first one is, we are now focusing on the new four modernizations of intelligence, and electrification, networking and sharing. The second one is, we are considering assessing the target of different types of vehicles. The traditional vehicles and electric vehicles need to be considered as different requirements. We have to set the targets separately. The third one is, we are planning to change the direction of the standard of NEVs. We are changing this standard from incentive to restraint. The last one is, we continue to put our energy on research of the lifecycle energy consumption of electric vehicles.

## **II. Cambodia:**

Firstly, I will talk about the Cambodia situations and then our department that involves in vehicle registration and also some mechanism. After overview, now, we have population around 15 million something. We have an area of 181,035 square kilometers. Mostly it's equal – I mean, the women are more than men.

The second is about our department about the land transport management. Land transport management, we are under the General Department of Land Transport. Our department, we manage vehicle registration, vehicle inspection, driving license issues, and transport business operation licensing.

As the data in Cambodia, mostly, we have the motorcycle registration, 85% among other vehicles. As the result as well, means in the last 10 years, motorcycles increased a lot as you already see in my presentation. It shows that in Cambodia mostly people use motorcycle than other vehicles.

To manage our vehicle registration, now we do the online registration. We call it automation registration. Our system consists of – we can reserve the vehicle registration, vehicle inspection booking, and driving license testing booking. It is pretty easy if you use the inspection by automation. You just go to the website link they provide, and just your ID card, your vehicle card and some invoice. You pay with corporate finance agency. Then you can choose the term for booking the inspection schedule.

Now, in Cambodia totally we have 16 vehicle inspection centers out of 25 provinces. Mostly, we have our inspection centers around the country in, we can say, urban areas. The people easily take their vehicles for inspection.

Our process of inspection, we have five processes of the inspection. First, we check and inspect the vehicle. First, we check the vehicle and type in the information. We check the physical first. And the second, we start to check with the machine that checks for the vehicle speed, vehicle wheel, and side up, and brake system. The third, we check about the light, horn, and emission. The fourth, we're checking the vehicle undercarriage.

After that, we check and evaluate, and issue the record whether the vehicle is passed or failed. If it fails, we will advise the owner to repair it and then can come to check again.

These are some features that show how we inspect the vehicles. If he or she, the owner passes, we issue the certificate. Our certificate is very easy that they just scan QR codes, and then they can see the data of the vehicle. It's mentioned here. Then it is easy for people.

After the vehicle inspection, now talk about the road crash in Cambodia just to update about the fatalities. In Cambodia, as we see it's compared from 2013 to 2017 and from 2018 to 2020, we see that the growth of fatalities is reduced – 45% reduced and serious injury also reduced 59%.

About fatality compared to the type of vehicles. As I mentioned before, they are the motorcycles; 85% used and registered in Cambodia. Mostly the people that have fatality are motorcycle users. If we compare year by year from 2013 to 2020, you see that the road accident, some years it's increased and some year it's decreased. For 2019 to 2020, around 20%. If we compare the fatality among the vehicles registered, its' 5.1%. If we compared to the population, it's 13.2%.

If you see the fatality by transport mode, as I mentioned motorcycles, motorcycle users, they are 74% to 75%. To reduce all of the fatality of the road safety work, we have the National Road Safety Committee that was established in 2016. The chairman of the committee was the Ministry of Public Works and Transport. Now, we change to Ministry of Interiors mainly under the deputy prime minister, Ministry of Interiors that chairs the National Road Safety Committee. This committee is, the role is to cooperate and coordinate among relevant ministries to implement the road safety policy and road traffic law.

This committee also has a subcommittee. Subcommittee 1 is focused on the policy and strategy and awareness campaign and the second commission is focused on the enforcement, as well as we have the provincial and municipal committee as well as road safety committee as well. We chair secretary general of the National Road Safety Committee, that is assistant of the National Road Safety Committee.

Also, for our national mechanism, we have the law, regulation, and road traffic law, and also some sub-degree relating to the penalty on the road traffic law. Also, we have National Road Safety Policy 2011 to 2020. Now, we are preparing the policy from 2021 to 2030 by following the UN Road Safety Action Plan and Stockholm Declaration. Before our policy, we had eight pillars and new we reduce to six pillars because the other two pillars – we have to do a lot. Now, we start to minimize and focus on some issues that we cannot reduce it. We have to continue to do that action.

Also, for the enforcement that I mentioned in our policy 2011 to 2020, and also, we continue for our policy in 2021 to 2030. We still focus on helmet wearing. Related to the data, Cambodian people, motorcycle users we have a lot. It's more than 80%. Actually, for the motorcycles, we have to wear helmet but for the implementation mostly people are not so much wearing helmet. They wear only when they see the police, and we have the enforcement. For the implementation, also for the enforcing people to wear helmet, we have to have the policy. Also, driving over speed limit also caused the accident in Cambodia. We have also the overloading, drink driving, and also related to the vehicle inspection as well.

The committee also not only does the enforcement, but also does the awareness. As I mentioned that we divide in two committees. Committee 1 is focused on awareness, and committee 2 is focused on the enforcement. In order to support the people to know about the road traffic law, also easy for applying driving license test, we have established the mobile app. People can learn it about the driving rules or road traffic law and also some spot radio, and something. They can use it via the mobile.

Now, we know that the technology, the information – right now we use the social media. Based on our activity and result, we saw that we have to use the fatality. As a result, in 2016, we got The Prince Michael Award of Road Safety, and also our automation system that we started in 2017. We got the ICT awards. Also, we have the public transport, and as a result recently, if we compare to the fatality from 2019 to 2020, it's reduced – 23.5% reduction.

Based on our implementation, we also have some challenges mostly about the enforcement. It is very hard to enforce people to obey the law. Also, we still need the support for the implementation of the Road Safety Action Plan, the capacity building. Also, we need transport policy to manage on that. Based on the challenge and step forward and improvement, we will do the transport policy that focuses on management of vehicles on the transportation. I just would like to inform as well that for the emission standard, Cambodia will implement about that prevention. In 2022, we will do it. Mainly for the Euro 4, we will start implementing the Euro 4.

My last slide, as we mentioned that we will promote the transport policy and public transport. Also, we still do focus on enforcement.

### **III. India:**

In India, we have a very evolved process for making automotive regulations in which various ministries are involved. Under different ministries, there are many subcommittees, and they are well assisted by many test agencies that support testing as well as research and development.

The nodal agencies for automotive regulation in India is Ministry of Road Transport and Highways. When we talk about national committees, we have two apex committees in India namely, CMVR-TSC and SCOE. They deal with subjects related to safety and emissions respectively. Both these committees are assisted by a committee called Automotive Industry Standards Committee. This committee formulates various different standards. This committee then is supported by various technical panels.

Also, in India, we have different subgroups which get us to India WP.29 activities. These experts regularly participate in the meetings that are held in Geneva.

Ministry of Road Transport and Highways, this is the nodal agency in India. These committees that are highlighted on the screen, those mostly are chaired by joint secretary from Ministry of Road Transport and Highways. In these committees, there is a representation from different ministries, and of course the relevant stakeholders like the industry and the test agencies.

In India, we have a Type Approval System, which is similar to UNECE. If you make standard, it's a third-party approval system. The agencies which can get the Type Approval certificate are notified in Central Motor Vehicle Rules and that rule number is

126. Then in India, we have our own standards. Either they are called Indian Standards or Automotive Industry Standards. While making these standards, we take care of our roadmap of regulations which has already been decided by all the stakeholders. As and when the time comes for implementing certain regulation, the standards are formulated, and the notifications are issued by the ministry from time to time.

When we talk about national rules or act, what governs these are technological advancements. They could be social requirements or international harmonization, or it could be inputs from national committees. These are the major driving forces of national rules and acts which are formulated in India.

In the year 2019, Government of India passed an important amendment to the Motor Vehicles Act. It has inclusions for various safety measures like end-of-life of vehicles, vehicle recall, then safety provisions for pedestrians, non-motorized transport, also for safety of children, and many other things. This has been a milestone to introduce various safety rules in India. Various safety rules are being formulated under the provisions of this act, and they will be issued by the government soon.

India is a signatory to Brasilia Declarations. Many activities started henceforth after signing of this declaration. Then in the recently held Stockholm Declaration – Stockholm Meeting, there was a declaration that we should decrease the fatalities by 50% by year 2030. India is committed to this pledge and has taken many initiatives that I'll be highlighting in the next few slides.

As part of these declarations, some of the few items, which were highlighted that they should be part of all the countries' regulations. These were protection from frontal impact, side impact, rules for electronic stability control, pedestrian safety, seatbelt regulation, child restraint systems, and motorcycle antilock braking systems. These were some of the standards which were identified. I'll be giving you a presentation how India has progressed on all these fronts.

Just taking a look at India's traffic scenario and the fatalities that have happened in the last 10 years or so. From the data you can see that the road accidents, they have come down from year 2008 to 2018. But the fatalities, they have gone up. That's a concern for a country like India because that number is huge. If you compare this figure with the people those who have died because of Corona, you will understand that these figures are really enormous.

However, when we see that from year 2000 to 2017, the number of vehicles on road in India has increased significantly. That is almost three times. However, the number of deaths, they have come down by three times. We are progressing, but obviously, that progress is not to our liking, and we will do our best to fulfill the pledge that we have in our hand.

This slide shows some of the key regulations that were introduced in India since year 2000. From 2015 to 2020, India took significant steps to improve the road safety by introducing norms for crash. We have mandated airbags, child restraint systems. Also, we have our unique requirements for speed and safety and seatbelt alert systems. We have requirement for pedestrian safety, ABS for different types of vehicle, automated headlamp on motorcycles. Also, for the buses like sleeper coaches and double-deck busses, we have introduced safety requirements. In the next few years, we are going



to have regulations for electronic stability control, and also various regulations for different types of vehicles.

Talking about different safety measures that India has taken as compared to the global targets that were identified which I had shown earlier, India mandated fitment of airbags. First driver airbags were mandated. Now, Government of India has issued a draft guideline to mandate fitment of airbag for front passenger seat also. Also, we have requirement for seatbelt reminder for both the front passenger seats. Then, we have requirement for manual override for central locking, rear park assist system, crash standards, and pedestrian safety. These were some of the norms that were introduced for passenger vehicles.

Talking about active safety measures, electronic stability control systems have been mandated for M1/N1 though that standard is if fitted basis presently, but India will be discussing whether to mandate it as a way forward in future. For buses, ESC is already mandated, and it will be implemented from year 2023. Brake assist systems, this standard again is implemented for M1 and N1 category vehicles. Also, ABS for two-wheelers, so that has been implemented in India from 2019 for all types of two-wheelers. ABS for almost all categories of vehicles is now in place in India.

Talking about electric vehicles, we have now revised our standards – most of the standards – on electric vehicles. These standards are in line with the regulations formulated under the UNECE. These will be notified soon by the government.

Keeping a focus on public transport, we have mandated various provisions to improve the public transport system in India. Talking about requirements for physically disabled people, there are requirements for wheelchair access in the buses; and of course, reducing the noise, vibration and harshness; improving the braking performance. We have also mandated the fire detection and alarm system, and fire detection and suppression system for the buses.

Improving the logistics sector also has been the focus of Government of India. We have introduced norms for truck as well as the trailers.

India is a vast country with various needs. We have formulated codes for different types of vehicles like ambulance, school buses, sleeper coaches, and so on and so forth. Some of these requirements are aligned with those available under the UNECE, or the other global practices that are available worldwide. In this standard, India-specific conditions have also been built in.

For two-wheelers also, we have now two new regulations with respect to motorcycle stands, external projections, and footrest. These new standards are in line with EU directives. They will be coming in force from January 2022.

Talking about emission norms in India, as we all know that India took a big leap forward, and we skipped Euro 5 emission norms. Those are called Bharat Stage Norms in India. We directly jumped from Bharat Stage IV to Bharat Stage VI Norms. Also, we'll be implementing real driving emissions. Next-stage emission norms not only for automotive vehicles but for agricultural tractors, CEVs and combine harvesters have been implemented. They will come into force soon. Various government initiatives have been taken to implement alternate fuels in India, like methanol, ethanol, and so on and so

forth. Initiatives are being taken by the Government of India to have our own self-reliance in the automotive fuels.

If we talk about emissions, if we can see in the last 20 years, the sulfur content has been reduced 250 times by implementing various emission norms in India. This has been a significant step forward. We hope that with the introduction of new norms, that is BS VI in India, the automotive emissions will come down significantly.

Some of the key safety provisions which have been notified in India are highlighted for your reference – not only safety, emissions as well. These are diesel with compressed natural gas and bio-compressed natural gas emissions. Then implementation of BS VI norms quadricycles, and OBD norms.

As far as safety is concerned, India has implemented has various norms highlighting some of the few. Those are high-security registration plates. Then, India has now aligned its vehicle dimensions with those available under UNECE. That has been a significant step that has been taken by India recently. Then, of course other regulations like TPMS, puncture repair kit, hydrogen fuel cells, and safety regulations for construction equipment vehicles.

Also, India is in now a process of setting up various inspection and certification test centers for in-use vehicles. As a step forward, now India is aggressively discussing to introduce regulations on end-of-life of vehicles. Both inspection and certification test centers and end-of-life of vehicle norms, these will comprehend each other. A draft policy has already been issued by the government, and we hope that the final norms will be issued soon.

#### **IV. Republic of Korea:**

Today, I would like to introduce the self-certification system and how to implement 1958/1998 Agreement under the Self-Certification system.

You may well know most of the countries including all Asian countries have operating Type Approval System. Only Korea, USA, Canada have been operating the self-certification system. You can see the main difference in the below tables. Main difference is that under type approval system, the manufacturers shall be granted to certain Type Approval authority to people selling. But under the self-certification system, manufacturers can prelist their vehicles without any approval by government or any designated authority. But manufacturers shall satisfy with the safety regulation. In case of Korea, we call the KMVSS.

Also, the government can select and test randomly whether the vehicle can satisfy with vehicle regulations like KMVSS. If vehicles do not meet the KMVSS, or have a defect affecting the safety driving, the government can order recall to manufacturers. We call this whole process the compliant test.

This page shows the relationship with the Ministry of Land Infrastructure and Transport, MOLIT, and KATRI. KATRI has been designated as a support agency in 1987 by MOLIT for managing vehicles such as providing all information on the vehicle policy of other countries, also carry out compliant tests and defect investigation. Also, we conduct R&D for the regulation, also including the WP.29 activity.

I would like to show our legal system for managing vehicles. Under the Vehicle Management Act, Korea has enforcement decree and rules and technical regulations. It's the ordinance of MOLIT. All manufacturers shall satisfy with KMVSS.

This page shows the structure of our Vehicle Management Act. According to this act, MOLIT can manage in compliance regulation life of a vehicle. This page shows the structure of Korea Motor Vehicle Safety Standards which is KMVSS. You can see that KMVSS is made by four chapters: the general rules, safety standards of vehicles and motorcycles, also the technical requirements for manufactured vehicles and vehicle components and parts.

Now, I would like to introduce the vehicle certification system under managing act. Firstly, manufacturer registration. Manufacturers, they should be registered to MOLIT in order to impose the responsibility of follow-up service including the compliance test and recall. Second is certification marking. When the certification is completed by the manufacturer, they should authenticate the label of self-certification inside the vehicle. Lastly, notification of vehicle specification. Manufacturers shall notify to the KATRI using the National Vehicle Management Network System.

This page shows the flowchart further explaining our self-certification procedure. Please refer to this flowchart.

Now, I would like to introduce our compliant test under the self-certification system according to our Motor Vehicle Management Act. KATRI has the responsibility of the compliant test according to this act. Annually, MOLIT establishes an annual compliant test plan. Then, KATRI buys test vehicles randomly, usually 50 models or more, including motorcycles from the market.

KATRI also carries out all tests whether the selected vehicles can meet KMVSS. Consequently, through the compliance test, when we find certain inconsistencies to KMVSS or defect, finally recall and penalty can be imposed to manufacturers.

This is a detailed flowchart for explaining complaint test procedure. Please refer to this procedure in detail.

Now, I would like to introduce how to implement 58 Agreement under the self-certification. I am sure you well know the UNECE WP.29 and 58, 98 agreements under the WP.29. You can see even though Korea has been a self-certification system, Korea has joined the two past agreements in 2004 and 2001 respectively.

I think definitely you would wonder why Korea has joined the past agreements under the self-certification system. Reason is that there was some pressure in trade committee meeting with USA and EU in the '90s. At that time, almost 30 years ago, they strongly requested to join past agreement to more easily sell their vehicles in Korean market. Due to various reasons, consequently Korea has joined the past agreements. Then, Korea has been introducing the self-certification system in 2003 instead of Type Approval System.

This page shows the status of harmonization with UN Regulation and UN GTR in each year. As of now, 73 UN Regulation, and 14 UN GTR were introduced into our KMVSS. Please refer to details on this page as how many UN Regulation and UN GTRs were introduced in KMVSS.

Also, this page shows the harmonization status during the last 4 years. Please refer to this slide.

Now, I would like to introduce how to amend the KMVSS. You can see this flowchart. I think all countries joining today's meeting have very similar procedures to amend your vehicle regulation. In case of Korea, firstly the MOLIT collect all opinions and comments from the KATRI and manufacturers and stakeholders. Then, they decide which items will be needed to amend. Then, the KATRI provides some draft amendment reflected and hear the opinions from the stakeholders. Then, KATRI submitted this draft amendment to MOLIT. MOLIT hosts the notification for public hearing and notifies WTO TBT during at least 6 days' period usually.

After public hearing, MOLIT prepared final draft to amendment of KMVSS including all final opinions and comments. Then, they sent to legal affair to final amend and publish. Then, legal officers in the legal affairs review this final amendment once again. Now currently, it takes too much time to finish their review. After finishing their review, the final amendment will publish.

You may notice that the procedure to amend KMVSS is too much complicated and time consuming. Generally, there are some delays to reflect the latest UN Regulation and UN GTR and its amendment into the KMVSS.

Lastly, I would like to introduce our activity in WP.29. Korea has been participating in WP.29 plenary meeting and 6 GRs and 17 Informal Working Groups. Also, you can see Korea has been taking the chairmanship and vice-chairmanship in GRSP and four informal working groups.

For your reference, last year under the COVID-19 situation, Korea totally attended 71 meetings, including virtual meetings related to the WP.29 activity.

## **V. Japan:**

First, I will introduce Japan safety measures. Second, I will introduce Japan environmental measures. Third, we will introduce our efforts for international harmonization of regulations.

First, safety measures for motor vehicles. This page is overview of traffic accidents and government targets. Regarding the traffic safety, Japan formulates traffic safety master plan every 5 years. The government has taken measures from each aspect of people, roads, and vehicles. The number of road accidents continues to decline with 3,215 fatalities and 461,775 injuries in 2019.

Next, we would like to introduce vehicle safety measures at the MLIT. This page is promotion of vehicle safety measures. These days, regarding the prevention of traffic accidents by elderly drivers we have set the target of increasing the ~~inflation~~ installation rate of AEBS in new passenger vehicles to 90% or more by 2020. For that purpose, we have set the goal that safety driving support vehicles have been promoted. We achieved this target in 2019. Since the spread of support vehicle is very effective as a safety measure, we will continue to promote it for the coming days.

Next page. This page is automated driving. In order to promote the development and commercialization of safe automated driving vehicles, we revised Road Transport Vehicle

Act in April last year, and we established the safety regulation for automated driving. This was the first time in the world. Furthermore, in November of last year, we were the first in the world to specify the model of Level 3 automated driving vehicles based on the established regulations.

This page is vehicle inspection and maintenance. In recent years, based on the situation in which advanced technologies, we enforced specific maintenance systems to perform precisely the inspection and maintenance corresponding to these advanced technologies in April last year. For new model after October this year, results of diagnosis by OBD are added to the item to be checked on periodic inspections of motor vehicles so that they will be inspected every year with the scan tool connected.

This page is proper maintenance and management of motor vehicles. The period of usage of the vehicle has been prolonged. Accidents such as bus fire and wheels falling off of heavy vehicles which can be prevented by performing the inspection and maintenance have still occurred. MLIT holds vehicle inspection and maintenance promotion campaigns nationwide with cooperation of related organizations, in particular, the three points listed in the red frame will be implemented as priority measures.

Next, environmental measures for motor vehicles. This page is government policy and status of carbon dioxide emissions. In Japan, Prime Minister Suga declared in October of last year that he would aim for carbon neutral by 2050. In order to achieve this, it is essential to reduce carbon dioxide and decarbonize the transportation sector which accounts for about 20% of Japan's CO2 emissions, and in particular, the motor vehicle sector which accounts for the majority.

MLIT will also work on various measures such as development, promotion, and improvement of usage of vehicles for carbon neutral.

This page is development and promotion of environmental-friendly vehicles. Regarding the improvement of fuel efficiency of individual vehicles, the expert committee has compiled the fuel efficiency standard for the passenger vehicles in 2013. Based on the results, the necessary revisions to the law were implemented in March last year. We will continue to promote the faster spread of vehicles with excellent fuel efficiency.

This page is emission control measures. Regarding vehicle exhaust gas measures, we have implemented the world's highest level of exhaust gas regulations for all vehicle models. We revised our regulations such as PM emissions regulations for direct injection vehicles and harmonized motorcycle emissions regulations with Euro V.

Finally, I would like to introduce about the International Harmonization of Vehicle Safety and Environmental Regulations. In Japan, through activities at WP.29, we are developing and establishing vehicle safety and environmental international regulations. We are promoting the utilization of IWVTA. With this effort, we spread and promote safer and more environmental friendly vehicles, thereby reducing traffic accidents, improving air quality and helping build up safer and more environmental-friendly international community.

As for with regards of fiscal 2019, we shall participate in WP.29 and its affiliate international conferences and 70 meetings and 177 experts. We have hosted five international conferences. At the WP.29 in June of last year, the international regulation for automated vehicle at the bottom right of this slide, ALKS, was established. In addition,

international regulations such as cybersecurity, WLTP of passenger vehicles have also been established. These regulations have been led by Japan. MLIT will continue to make international contributions.

## **VI. Malaysia:**

I would like to share some update from Malaysia in terms of motor vehicle regulatory framework and Type Approval system in Malaysia.

From the introduction, I would like to share here about the JPJ. JPJ is a regulator or the Type Approval authority which is we are responsible to regulate the technical specifications of motor vehicles and could enforce the regulations on motor vehicle including the driver on the road. Other agencies under MOT also collaborate with JPJ. We have MIROS.

Basically, in Malaysia, our main reference in terms of regulation on motor vehicles, basically we have the Road Transport Act 1987 and also Road Transport Rules. These are two main regulations, will be referred by JPJ and enforced through several mechanisms. For example, of course we conduct the rule enforcements and also automated and other mechanisms under the Type Approval process, which is we will increase the features and quality performance of the motor vehicles introduced in Malaysia.

Basically, in Malaysia, we are also members under WP.29 since 2006, which is we are signatory under the 1958 Agreement and also 1998 Agreement. Besides Malaysia, in ASEAN we have Thailand as a member under the 1958 Agreement.

In terms of motor vehicles safety standard compliance in Malaysia, in Malaysia, we recognize the compliance based under UN Regulation and also Malaysia's standards which is for the – until now, we have implemented 113 UN Regulations under the Type Approval process.

Then, through the harmonization, the UN Regulation, actually we hope we can reduce the technical barrier to trade, especially in terms of homologation for the motor vehicles in Malaysia.

Besides, we have used several Malaysian standards which is we have 12 Malaysian Standards have implements related with the motor vehicle and enforced under Vehicle Type Approval system.

This is a general overview in terms of implementation of Standard Compliance in Malaysia. Basically, the roadmap by JPJ under the Vehicle Type Approval System based on the mutual domestic consultation with our automotive industry. Basically, we will consider in terms of some period for the preparation for the industry to comply any standard compliance to be implemented under Type Approval system in Malaysia. So, in future basically in progress we are focusing on strengthening the mechanism of the compliance especially for the existing UN Regulation and the Malaysia Standard. We have enforced under the current approval procedure especially for in-complete vehicles which is in-complete vehicles involved in several states of the Type Approval process. This is the scope we are in currently process to improve it. Also, we are review on gazette if necessary for the new UN Regulations based on the demand on the current industry and based on current policy under the ministry of transport.

So basically, this is our view in terms of Vehicle Type Approval System in Malaysia. Basically, the purpose of Type Approval system in Malaysia is same like other countries which is in order to confirm the production sample of the vehicles should comply to the specific standards or UN Regulation or Malaysia Standard before it's allowed to register in Malaysia. So basically, in Malaysia for the Vehicle Type Approval System, we have two regulators involved in it. First of all, of course, it's JPJ, which is we will cover above policy related under vehicle safety, and we have DOE, Department of Environment, which is we will cover in terms of policy related on the exhaust emission and noise.

In Malaysia, we also developed specific guideline related for the Vehicle Type Approval procedure in order to guide our industry how to apply the Type Approval, how to get the approvals, and also what's the requirement of the Type Approval also will be mentioned in this guideline. Currently, we are in process to introduce the new guideline which is we target to release it by this year. Actually, this year we are in process to construct our local industry, and the process is still going on. In terms of the amendments, actually, we have some amendments especially on the existing procedure in the Type Approval systems in order to make it more clear and to reduce the bureaucracy in terms of approval and data approval in Malaysia.

The next, in terms of improvement, basically, this is our view, the process, how the vehicle Type Approval in Malaysia conducted by JPJ. They are different from before, and basically right now its application for vehicle Type Approval must be submitted through online application what we call eVTA. So, everything from the submission until the approval, that means issuance of the VTA certification will be conducted through online which is in terms of the process the flow is the same, only different in terms of the submission platforms which is we have used the online platform through eVTA.

Basically, this is a general view of the eVTA system which is we have tried to implement since the first year in 2020, last year, actually. So basically, this system still needs some more improvement and it's still currently in progress in JPJ. Basically, through this system, we have improved our system record management and also the approvals of the Type Approvals. Also, we have strengthened our communication channel between the regulator and our industry. So, this is what we can get from the implementation VTA Type Approval System through the online system.

Basically, as a summary for my presentation, the first, as I mentioned before, JPJ, we are a regulator in Malaysia in terms of to regulate technical requirement of the Motor Vehicle Act. Also, we are an enforcement body for motor vehicle including the driver on the roads. Malaysia, we are the members under the WP.29 and we have made UN regulations as a mandatory standard or main benchmark for the motor vehicle requirement in Malaysia. In terms of implementation of UN regulation or the standard compliant, we have implements under the Vehicle Type Approval System for the new model of the vehicle types.

## **VII. Myanmar:**

Presentation is about Current Status and Future Perspectives of Automotive Sector in Myanmar.

In my presentation, these outlines are included. First one is current situation and existing legal framework. The second one is action plan. The third one is vehicle inspection procedure and future approach. The fourth one is adoption of UN Regulations.

The fifth is the way forward by strengthening institutional arrangement. And the last one is challenges to automotive sector.

In this slide, I would like to present about current situation and existing legal framework. Government's last Automotive Policy in May 2019 to support sustainability and development of automotive industry systematically. The policy was directed step by step from used-car importation through industry development. Some policy and laws are related in big setup, they are shown in this slide. Currently, automotive sector is cost-cutting sector. Automotive sector is the promoted sector in our country. Some incentives are provided fund by investment law, so we need strengthening of our institutional arrangement.

Concerning with National Road Safety activity, National Road Safety Council was established under Road Safety and Vehicle Management Law in 2020. Members from related ministries, organizations, states, and regions are included in NRSC.

National Road Safety Action Plan from 2014 to 2020 was performed with 101 activities in 12 sectors to reduce the fatalities from traffic accidents by 50% based on year 2013.

NRSC will continue new action plan 2021 to 2030 where we will implement with 107 activities in 8 sectors to reduce 50% of fatal rate in 2030 based on 2019 data.

During the implementation of National Road Safety Action Plan 2014 to 2020, number of registration vehicles increased up to over 7 million in 2019 compared to over 2 million in 2011.

The left figure shows vehicle registration, and the right figure shows traffic crash information. From 2011 to 2019, the number of vehicles were slightly increased. As shown in the right figure, the number of accidents, injury, and fatality were slightly decreased after the implementation of action plan under the supervision of NRSC.

In this slide I would like to present about current vehicle inspection and future procedure. The first figure is current vehicle issuance procedure, Regulatory Act, industry and transportation to use the certification of approval. The second figure is vehicle Type Approval granting procedure. Supervision committee will be led by industry. Then related ministry are involved in supervision committee. Regulatory authority/designating body will be established in near future.

This is the development of National Standard for Components and Systems of automotive product, assurance and safety, quality, and environment production based on UN regulations. These standards are officially published as quality standard by National Standard Council. Three of the ongoing projects for NRSC approval, and another three related with emission standard are in the processing.

This slide shows the way forward to strengthen institutional arrangement. Automotive policy expects to enter the regional and global supply chain through the strengthened institutional arrangement. Technical assistance, financial supporting, capacity building and training program, data and information collection are essentially needed to strengthen institutional arrangement.

Automotive sector is very initiating in our country. Investments are flowing year by year. Here are some challenges in automotive sector to develop measures related to vehicle



safety and environmental protection to develop Type Approval system systematically to implement UN Regulations, strengthen institutional arrangement.

### **VIII. The Philippines:**

Allow me to present a short brief on the development and current initiatives of the department related to vehicle safety and environmental protection.

Shown is the outline of the presentation.

There has been an increasing number of motor vehicle registration in the Philippines, although for 2020, there is a decline due to the quarantine imposition brought about by the pandemic causing the suspension and limitation of transactions. Per motor vehicle data in 2020, 61% of the total registered vehicles are motorcycles accounting the highest number among the type of vehicles which is actually the same for the previous years.

Moreover, the number of road crash deaths is unacceptably high in the Philippines with 11,292 recorded fatalities. Thirty people are dying each day, majority are 20-29 years' old. And most fatalities involve motorcycles and pedestrians. Given the large percentage of motorcycles and current vehicle stock in the Philippines, this requires prioritization and implementation of necessary safety policies. We do have relevant policies right now, for example, helmet use, but like any other countries and other nations, the challenge is the implementation. Unnecessary modification in motorcycles are also pretty big and violation has corresponding penalties.

On the public transportation sectors, there is approximately 179,000 number of jeepneys nationwide. Jeepneys is the most common mode of public transportation in the Philippines. Of these, 90% are 15 years old and above. Old jeepneys are diesel-fed, inefficient, and generate a lot of pollution, hence the need for initiation environment friendly and safer vehicle for public transportation.

The increasing motorization is also causing higher emissions and increase urban pollution. The current transportation is predominantly based on the combustion of fossil fuels which is the largest source of air pollution in greenhouse gases. Consequently, there is a need for sustainable and safer mobility. To meet the environment and steep challenges of road transportation, a number of measures have been designed and implemented. But we do acknowledge that these aren't enough and hence continuous policy development shall be needed.

For road safety, we adhere with the System Safe approach. We do acknowledge there is a shared responsibility between system designers, the government, the private sectors, and the road users for safe travel outcomes on the road network. Our efforts are actually ongoing in Philippines Road Safety Action Plan and we try to consolidate all the efforts by addressing all the pillars of the road safety.

So how do we develop measures for both road safety and environmental protection? Baseline information is critical on policy meeting, as we all know since it will be critical on desired outcome or impact of the policy which we are going to achieve or the standard we are trying to implement. The best practices and lessons learned, for example, from these meetings and other foreign or international gatherings can be adopted from other nations, regions, or countries.

A series of technical working group meetings are also being conducted with relevant resource speakers and experts for different relation, proportion and standards. And most importantly, the stakeholder consultation is vital to ensure that the perspectives or the inputs of the relevant stakeholders are integrated to the policy or the standards we are trying to develop and to create a more comprehensive and effective measures. Finally, all measures undergo government processes, procedures, and approval depending on the level of policy we are trying to formulate or develop. For example, if it's just a department order which is regarding to a general policy area, it is limited to the approval of the department or the ministry. But what if we are trying to translate the standards or policy into a law, then it shall undergo a lobbying process in the congress and corresponding procedures of approval. Some measures can be beneficial for both environmental and CEP targets. For some areas, there will be no interaction at all. But it is important to identify measures of benefitting both because this represents effective sustainable transportation measures.

Moving forward, allow me to present the key initiatives among others of the department on vehicle safety and environment protection.

We have the motor vehicle inspection system which ensures the roadworthiness of the vehicles. Currently, the available government facilities in the country are not enough to accommodate all the motor vehicles. To solve this issue the government has decided to conduct vehicle inspection through private sector using a public-private partnership. Standards on inspection of roadworthiness are developed and adopted some of the international key standards. Each center is equipped with state-of-the-art equipment and machines to do a variety of wide-ranging tests and processes for both light vehicles and including motorcycles. These modern testing cycles are designed to test 61 points for roadworthiness of vehicles. It also aims to cover more vehicles for registration, inspection nationwide and ensure that the vehicles are roadworthy prior to registration or anyone. It is linked to the database of the Land Transportation Office giving no room for modification or falsification of results.

Another ongoing project is the promotion of low-carbon transport system in the Philippines. It is comprised of three components: the policy support, institutional capacity development, and the private sector participation and investment. Currently, this project is focusing on baseline study and support the policy standards and guidelines being supported such as foreign country's technologies in the Philippines such as electric vehicles and hybrid vehicles. As mentioned, the project is currently part of several technical working groups working on policies related to electric vehicles and other related infrastructures. This project also identifies CEP as part of the pilot implementation. Having a pilot implementation or initial implementation is also another way of improving measures or addressing the gaps in the policies or standards. Further, the target direct GHG emissions reduced due to the project over the technology lifetime in 69,013 parts of carbon dioxide equivalent or 100 units of electric vehicles. Although we wanted to go beyond the target as we see the potential and benefits of electric vehicles in the country.

Lastly, the public utility vehicle modernization program. It is a comprehensive system reform that will entirely change the public transportation industry.

New vehicle standards are being developed which is based on extensive consultations with government agencies, different associations, and even local and international manufacturers.

The modern public utility vehicles are designed to be environmentally friend, safe, secure, and convenient.

The public utility vehicle will now be replaced with vehicles that either use diesel engine or electric motors to provide safer travel while helping to mitigate the ill-effects of climate change. We wanted to promote the shift from private use to public transport use maybe improving the public transportation supported by standards and policies. Road safety and environmental protection are equally important hence addressing both will continue to save lives and improve the quality of lives. If you need more further details regarding the programs we have presented, please do not hesitate to contact us through the secretariat.

### **IX. Singapore:**

I am going to present mainly actually on Vehicle Type Approval System as well as the AV framework.

Under the Land Transport Authority, we have this Vehicle Engineering Subgroup, and under the Vehicle Engineering Subgroup, there are two subdivisions. On the left you can see the Vehicle Approval and Control which generally actually ensures and look into those new and unused vehicles specifically actually on its construction and safety as well as the roadworthiness requirements. It looks into the Type Approval system, periodic inspections, and enforced inspections, as well as vehicle recall monitoring, and vehicle scrapping. On the right is the Vehicle Technology and Standards Division. It looks into on the area of new vehicle technology especially actually on the autonomous vehicle as well as the electric vehicle.

I will talk about the Vehicle Approval System which is under the Vehicle Approval and Control Division. Generally, every new vehicle in Singapore it has to be approved before it can be registered and being used on public roads. How it is being done? It's being done actually via this Vehicle Inspection and Approval System. Under this system, motor dealers they are able to submit online on the vehicle manufacturers' certifications and test reports. And they are also required to showcase their e internationally recognized, for example, UNECE Regulations, Japanese standards, American standards. And the vehicle will also actually have to comply with exhaust emission standards set by our local, national environmental agency for petrol- and diesel-driven vehicles. We also require at least one unit of the vehicle to undergo pre-registration inspection.

Just now I talked about these vehicle inspection and Type Approval system. In short, we call it VITAS. It is a web-based system. Basically, it is to facilitate an end-to-end management of the vehicle approval application as well as inspection processes from the point they are being received until the end of the cycle which is they are being approved. This VITAS system actually system is also linked to our authorized inspection centers as well as the motor dealers.

I will give a brief overview of the Type Approval workflow. On the left you can see the users which is the motor dealers, local builders, and parallel importers. So first they need to apply for this Netrust token login. Once they have this, then they can actually go to internet, go to VITAS, and then to submit their submission online. And when Land Transport Authorities site, the LTA site, will be able to retrieve the documentation that they submitted. We will go through it. Once all the documents have been checked and all is in place, we will require the motor dealers to send one of the vehicles to any of the authorized inspection center for inspection. At the inspection center, the inspection

center actually will be able to tap into VITAS and retrieve the technical information of the vehicle. From there, they will assess the vehicle, and they will inspect the vehicle. If they find that everything is in place, they will pass the inspection of the vehicle, and they will send the result back to LTA through VITAS. At our end, at LTA, once we see the inspection results and everything is in order, we will, at the end of the cycle, email the approval letter to the motor agents, and that's when they can proceed to register the vehicle.

So that's the general overview of the vehicle approval workflow.

Next up is another division which is the Vehicle Technology and Standards. Under this division, mainly, actually, to build up knowledge on those new advancements in vehicle technology as well as also to keep abreast of international vehicle safety standards, rules, and regulations. Apart from that, this division, actually, also sets and reviews vehicle safety standards regulations mostly actually on autonomous vehicles as well as electric vehicles. We also actually provide technical assessment on new standards and regulations of vehicles as well.

Let me dive a little bit into autonomous vehicle portion. The division actually does assessment AVs for compliance with our vehicle standards before allowing them to go on trial and deployment on public roads. The division actually also drives to set up and manage of the Center of Excellence for Testing and Research of Autonomous Vehicle, in short, we call it CETRAN. We manage them and especially projects related to functional safety, performance, and evaluation, as well as standards for autonomous vehicles. We do also design our AV test framework and work with CETRAN to develop tests and verification standards.

The division actually as well monitors the progress AV trial participants once the AV actually has been approved to go on trial on road. We also look at any incidence that actually happens related to autonomous vehicle trial. We also actually coordinate vehicle engineering issues related to AV between our internal and external agency as well as CETRAN. Of course, we have to keep ourselves updated so we do keep abreast of global development of those AV regulations and standards.

In terms of framework, for AV trial vehicles that do not comply with our technical requirements, there can be permitted exemptions. So minimum basic vehicle construction and safety requirements must be met. For example, like effective brakes, position lamps, direction indicator, etcetera.

For unregistered AVs to be approved to conduct trials on public roads, there will be issue with these AV authorizations, and it comes with some terms and conditions. Some of the conditions, for example, is it has to have a minimum insurance coverage for third-party liability against death or body injury to any person or property damage. Safety drivers actually need to have a valid driving license and have a clean driving record, and he has to be trained in operating AV. And each AV actually needs to have a black box to record the AV testing activities. We also require the AV participant to submit a progress report and accident reports.

Here are actually some of the AV trials that are currently in Singapore. For the top portion, the fixed and scheduled services, we have this autonomous shuttle that is being run in one of our tourist attractions. The area is Gardens by the Bay. For point-to-point

mobility-on-demand, we also have another autonomous shuttle that is being run in our Sentosa Island.

## **X. Vietnam:**

Today, I am delighted to be here to present to you about the processing of developing of measures related to vehicle safety and environmental protection. My presentation is divided into three parts: first the overview; second, actions of Vietnam; and finally conclusion.

We start with the overview. As of April 2019, the population of Vietnam was more than 96 million. With the population progress, there is more and more vehicle attending in traffic in Vietnam. The number of vehicle especially used is approximately 4 million. New assembled motorcycles is approximately 2.8 million. The transportation in Vietnam is improving rapidly in terms of both quantity and quality. However, it could also lead to more traffic accidents.

As you can see, the statistics on road traffic accident. The situation on road traffic accident is serious in Vietnam. Almost fatalities are young and in working age. Root causes by quality of vehicles, infrastructures, driving drunks, consciousness traffic.

In state from 2012 to 2020, the government targets are reduction of the fatalities and injury from 5 to 10%. Improve the vehicle safety and environment protection. To ensure traffic safety, firstly the vehicle safety measure is necessary to achieve the target. This has to develop quality vehicle by building the directional standards system as national regulations for new vehicles in future.

Second, the environmental protection is important in life. Development of low-emission and fuel-efficient vehicles. Improve the social benefits, health, and quality life. Environment-friendly vehicle.

In order to develop vehicles, set the environmental protection. We need to combine the government policy, infrastructure, testing facilities, education communication as a national regulation.

Every year based on the government plan and the direction from national traffic safety committee, the Ministry of Transport will direct other sectors to conduct the national strategy. You can see the two slides is legal document related to vehicle safety and environmental protection.

The legal document related to vehicle safety and environment protection issued in 2019-2020. In 2021, we are having a plan to update and completion of QCVN, and TCVN follows UNR 122, 149, UNR 44 and UNR 70.

The number of national technical regulations reference to UNECE Regulations 12 for vehicle and 3 for motorcycle. The number of national standards for vehicle and motorcycles reference to ISO Standards 54.

Vietnam Register has two testing facilities. First is Vietnam Motor Vehicle Testing Center and the second is the National Emission Testing Center.

To improve in our infrastructure to build infrastructure and signal transport systems is most important. The development of public transport vehicles and encourage to use e-vehicle.

The vehicle safety and environmental protection is the most important international target. This is related to the quality of vehicles and certification systems.

The vehicle certification system could ensure that new vehicles and components meet the national mandatory regulations on safety and environmental protection. In addition to this, the process of acceding the ASEAN MRA and 1958 Agreement is our top priority. Vietnam also has plan to accede to 1958 Agreement in 2023.

Invest to testing facilities, laboratories and manpower. Continue to improve the Vehicle Type Approval System.

Developing countries need to learn among countries and share experiences for harmonious vehicle certification systems MRA which is under Framework 1958 Agreement. By doing so, the quality control of imported vehicles/components will gain great benefits for interests of each country.

## **XI. Thailand:**

Today, I would like to give a presentation on the topic of Process of Developing Measures Related to Vehicle Safety and Environmental Protection.

First, I would like to start with some Policy and Related acts. Then I am going to explain about the Motor Vehicle and Land Transport Act followed with notification issuing process, signed and enforced notification, and the last one would be the summary.

The first content is about the Policy and Related Acts. From this chart in Thailand Ministry of Transport together with the Committee of National Environment and Committee and Road Safety are the authority to issue the policy. Then Department of Land Transport or DLT will be one of the responsible authorities to respond. So how do we respond is shown here. There are two acts under our responsibilities. First, the Land Transport Act and the second one is the Motor Vehicle Act. The Ministerial Regulation is issued under the Land Transport Act No. 9 while Ministerial Regulation, 2005 and 2008 issued under the Motor Vehicle Act. Then our DLT notifications are issued under the Ministerial Regulation.

Next, I would like to explain more about the Motor Vehicle Act. The Ministerial Regulation 2005 and 2008 issued under the Motor Vehicle Act as I mentioned previously. The Ministerial Regulation 2005 concerning mostly about the characteristics about mass, dimensions of the motor vehicle while the Ministerial Regulation 2008 concerned about the vehicle part system and allow the UN Regulations promulgation. We also amend/draft the national regulations technical by adopting the UN Regulation is our first priority. We also plan to amend and draft national technical regulation and joint discussion with the TAIA or the Thai Automotive Industrial Association and TAPMA or the Thai Auto Parts Manufacturers' Association. We focus on the L3-, M1-, N1-type vehicles. And we set the UN Regulation for vehicle class for registration.

Next, for the Land Transport Act 1979, the Ministerial Regulation No. 9 is about the vehicle parts system, mass dimension for bus and truck. This MR9 was revised three times in the past 8 years for the reason to add more vehicle parts and update the

performance ensuring vehicle safety. Most of our notifications issued aligned with the UNRs with some adaptation.

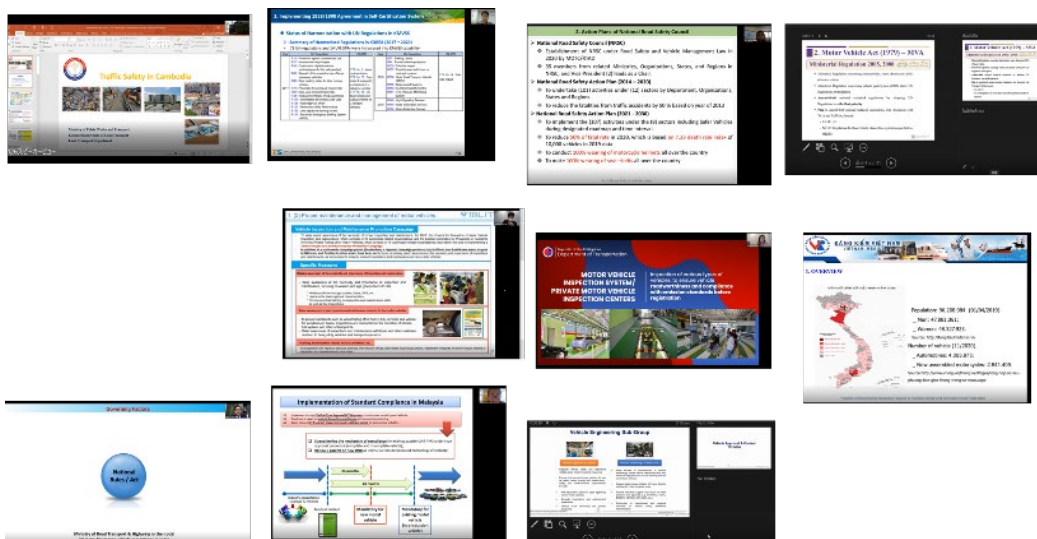
Next, I would like to explain the process of notification issuing. This schematic present process of notification. Usually when DLT are going to issue some notification, we set up the working group for each UNR with some collaboration with the TAIA and TAPMA. Then second, the notification draft by our working group, then we send it to the legal affairs bureau for checking, and then if it was approved, it will be signed by our director-general. After finishing off all these processes, the notification can be issued.

This slide shows the Current National Regulations under the Motor Vehicle Act. For M1 and N1, we already enforced R39, R43, R28, R51 as shown on the left figure. Also, the R17, R16 concern about the safety belt. For the L3-type vehicles we already enforced R81, R39, R28, and R41.

For the plan promulgation soon. This year we have plan to enforce this regulation, for example, L3 R78 braking, R50 driver-operated controls, R53 the installation of lighting for the M1 and N1. R13H about braking, for example.

For the National Regulations under the Land Transport Act, hopefully, this year, we will announce the R66 which is about the strength of the structure of the bus. R58 rear underrun and protective device. R73 lateral protection device.

So, we come to the summary part. Thai government set road safety as their first priority especially in public transportation. The Department of Land Transport by Automotive Engineering Bureau is an authority to issue the regulation for vehicle to increase the safety performance through conducting by Type Approval following UNRs. And some adapting from UNR might be required in some context to comply with our Thai condition.



**[Day2: 27<sup>th</sup> January 2021]**

**Moderator: Ms. Tanaka (JASIC)**

**Chairperson: Mr. Sato (JASIC member)**

**1. Progress report of activities on ASEAN Mutual Recognition of Arrangement**

**(Mr. MOHD SHARULNIZAM BIN SARIP/ASEAN International Expert Liaison)**

For information, the APMRA has emphasized on the several objectives which include to enhance the cooperation amongst member states in ensuring the safety, quality and environmental protection of ASEAN automotive products. We also aim to create a single market and reduce the technical barriers to trade in automotive sector through harmonization of technical requirement regarding safety, quality and environmental protection of ASEAN automotive products to facilitate the negotiation of mutual arrangement between ASEAN member states and also to increase the utilization and strengthen the capability and also the testing facilities amongst ASEAN member states. So, the APMRA actually will be complemented with the guidance document that is currently being established by ASEAN Automotive Federation with cooperation by Malaysia, which is divided into five parts, which include the introduction of APMRA, the general information, the frequently asked question to operationalize the MRA, the technical aspects of the implementation and also the details of the appendices to the APMRA.

As for the progress for APMRA, for information, last week, ASEAN member states have held the first ASEAN automotive committee and also the special APWG to further discuss on the progress for APMRA implementation. So, the ASEAN Consultative Committee on Standards and Quality-APWG held on 20th of January 2021 and also was preceded with the first AAC meeting, which was held on 19th of January 2021. So, for information, there are 19 UN regulations and accedes to the phase one of APMRA. But out of these 19, we also segregated the implementation into two phases and the first 10 regulations which will include such elements like braking system, head restraint, audible warning devices, speedometer and also the steering equipment.

The AAC also discussed about the necessity to establish the MRA experts working group, namely pollution and energy, GRPE; the noise and tyres, GRB; lighting and light-signaling, GRE; general strategic, GRSG; and also ASEAN passive safety, GRSP. Not to forget the final working group of which become the most vital working group right now will be the autonomous and connected vehicles expert working group which is known as GRVA. So, actually, these all expert working groups aim to resolve all technical issues that might be faced for the future ASEAN MRA implementation.

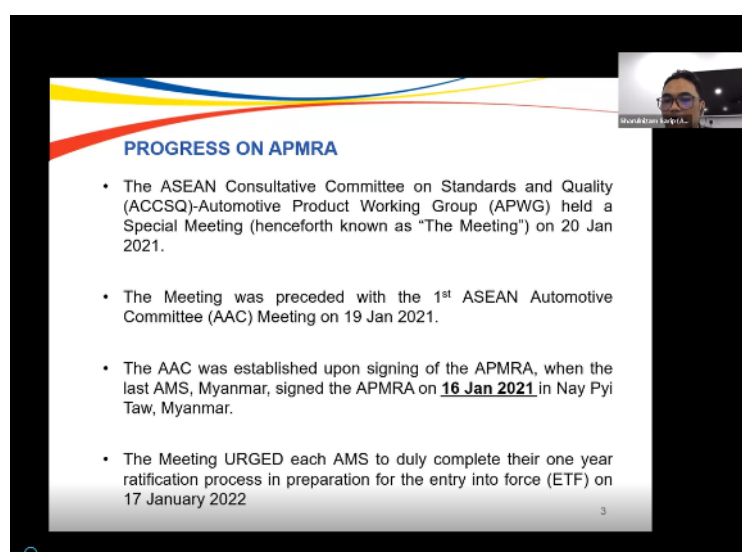
The AAC actually was established upon the signing of APMRA when the last ASEAN member states, which is Myanmar, signed the APMRA on 16th of January 2021 in Nay Pyi Taw, Myanmar. Therefore, actually the implementation of APMRA will be complemented by the guidance document and we are given 1 year for the ratification process in preparation towards the entry into force all UN regulation and accedes in the MRA. So, during the meeting, it was urged that each ASEAN member states to duly complete the 1-year ratification process in preparation for the entry into force, which will be on 17th of January, 2022.

As for the progress for the draft guidance document, as mentioned earlier, Malaysia has been appointed to work with ASEAN Automotive Federation to conclude the guidance document and the deadline for the feedback will be on the 20th of February 2021. And on top of that, it is also noted that Malaysia and AAF will work to propose the trial run of



the APMRA focusing on the regulation and accedes in the APMRA, which is targeted to be concluded by November this year. So, the objective of this trial run includes to determine the overall certification plan for UN regulation implementation in ASEAN, [--] test report format, type approval and also the application procedure.

So, the meeting noted that AAF's APMRA trial run proposal that kicks off in February and ends in November 2021 and agreed for AMS to review and revert to ASEAN secretariat via Malaysia by 2nd of February 2021. It is also agreed that AAC to update the technical cooperation with international partners which include Japan. So, for information, in the previous APWG meeting, I have updated the meeting that JASIC has assisted Malaysia to provide the latest update for WP29 activities. So, this kind of cooperation shall be continued in the future as ASEAN automotive committee really require the experience and expert sharing coming from various experts especially Japan. Therefore, I would like to open for any discussion or any cooperation that would like to be suggested by Japan to ASEAN. And I have been appointed as ASEAN International Expert Liaison and Japan may contact myself directly and we can further discuss on the project for ASEAN, Japan cooperation.



**PROGRESS ON APMRA**

- The ASEAN Consultative Committee on Standards and Quality (ACCSQ)-Automotive Product Working Group (APWG) held a Special Meeting (henceforth known as "The Meeting") on 20 Jan 2021.
- The Meeting was preceded with the 1<sup>st</sup> ASEAN Automotive Committee (AAC) Meeting on 19 Jan 2021.
- The AAC was established upon signing of the APMRA, when the last AMS, Myanmar, signed the APMRA on **16 Jan 2021** in Nay Pyi Taw, Myanmar.
- The Meeting URGED each AMS to duly complete their one year ratification process in preparation for the entry into force (ETF) on 17 January 2022

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## **2. Information on WP.29 activities (Michio Miyamoto)**

Last year, we had three times WP29. Therefore, I would like to explain three WP29 results briefly. First one is the 180th WP29. It was held on the 10th to 12th March last year. This time last year Mr. Erario of Italy was leading the discussion. And here I show the attendees here and regulators mainly means coming from the Asian areas and also mentioned some energy up here, OICA of course attended.

Then the next one is the important topics for 1958 agreement this time and the Schedule 4 is kind of attachment of the 1958 Agreement and this time the revised Schedule 4, Schedule 4 means the approval numbering system and that has been effective from 6th March last year. Second one is IWVTA the proposal of the UNR0-03 was presented. Here it is the UN regulations are included and also MLIT, Japan announced they issued the first IWVTA approval among the Contracting Parties. And second one is the automated driving. It's related to the expert group for automated driving and brakes. And the new draft UN regulations were adopted by GRVA and it will be sent to WP29 for the voting in

June sessions. The ALKS, means Automated Lane Keeping System at level 3. And another one is cybersecurity and software update.

Also, many amendments or the corrigenda of the UN regulations were adopted. I attached the word document here, if you click here, you can find the list of the approved amendments, then I highlighted by arrow, it is related to the ASEAN MRA. Please check it later.

The next one is related to the 1998 Agreement. Unfortunately, this time the AC3 was not established. Therefore, all the things have been postponed to the June session.

Next slide is 181st WP29 result. It was held on the 24th June last year. Also, this is the same manner as I showed you before. The red part is coming from the Asian areas, including Pakistan or Vietnam, Singapore also. The meeting was held as a remote meeting and the agenda is only voting items. That's the reason why it's one day meeting.

Important topics for 1958 agreements, adoption of the UN regulations, the fuel system integrity and safety of electric power train in the event of the rear-end collision, WLTP emissions, another one is cyber security and software update and also automated lane keeping systems. These were newly adopted. Also, many amendments were adopted. And also, as I mentioned before, yellow part is related to ASEAN MRA items, which is mentioned in attached in the Word document.

As for 1998 Agreement, no new GTRs were adopted and six amendments of the GTRs that are listed here are adopted.

The last one is the 182nd WP29 result. It was held on 10th to 12th November last year. Chair is the Mr. Kisulenko and vice chair is Mr. Erario. Actually Mr. Erario is leading this meeting. The manner is the same, regulator the countries coming from the Asian areas. Also, this meeting was held as remote meeting.

Important topics related 1958 agreement, the new UN regulations for reserving motion and moving off information systems adopted. Unfortunately, it was the tables, but the real driving emission and event data recorders, these two UN regulations have been postponed to the March WP29 session this year. IWVTA UN regulation 0-03 was adopted and also the other amendment/corrigenda were adopted. Yellow part is related to ASEAN MRA items. That is mentioned in the attached Word. Also, interpretation document for cybersecurity and software update were agreed because this is quite new and unique regulations. We need some guidance, therefore the interpretation document has been made and agreed.

It is related to the 1998 Agreement. New GTR, the Determination of the Electrified Vehicle Power was adopted. Also, three amendments of the GTRs were adopted.

These are brief explanations. As for your reference, I attached the three official minutes in my presentations. Please refer to it later.

### **3. Report from ASEAN Automotive Federation (AAF) (Emjunan Sihite)**

This is our report on 25th RACE meeting for Regulation and Certification Experts Meeting or RACE was held on 25th January 2021 via video conference. So, at a time the meeting

was attended by the automotive industry from Asian countries like Cambodia, India, Indonesia, Japan, Malaysia, Myanmar, Philippines, Taiwan, Thailand and Vietnam.

In this time because the meeting also is one of the very important movements in the ASEAN region according to the ASEAN MRA, so, in this opportunity, we would like to share as the latest situation of the ASEAN MRA as currently mainly for the issue of non-binding trial run plan for the future of the ASEAN MRA implementation. So, the meeting already acknowledged for the latest situation of the ASEAN MRA and related to the importance of non-binding trial or the purpose is to identify about the possible difficulties on actual practice upon implementation of ASEAN MRA. So, this is the reason why we have to conduct the non-binding trial run so that to make the smooth implementation of the ASEAN MRA. As you may already know, maybe start from 2022. So, in this time, the industry has encouraged also ASEAN governments, so they can join for non-binding trial run of the ASEAN MRA.

Related to the WP29 activity in Asian region, also each automotive association already reported the latest regulatory movements and also issues related to the exhaust emission, safety regulation and new technology related to the UNR or WP29 activity. So, in the preparation to the accession 1958 or 1998 Agreement and implementation of UNR/GTR, so once again the contribution from related government agency and automotive industry is very vital. In relation to the ASEAN country, some ASEAN countries which have not acceded 1958 Agreement, but now they are considering to signing the ASEAN MRA before acceding to the WP29. So, let's say priority to signing the ASEAN MRA initial stage before acceding to the WP29. And then lastly, we can see in the number four, the meeting also encouraged Asian economic to continue discussion and exchange information on activities related to the safety, emission, electric vehicle issue and new technology.

According to the electric vehicle movement related to regulation in Asian region also we already discussed, and the information is that each automotive industry association already reported the latest EV regulation movement and their government policy in each Asian countries. So, the meeting acknowledge that the automotive industry-government collaboration is very essential to participate in the formulation of EV policies and propose to the government to provide the relevant information at public-private joint forum to encourage harmonization of UN regulation for EV through WP29. So, that's all the report from RACE meeting that we already conducted 2 days ago.

#### **4. Report from Parts Industry (Japan Auto Parts Industries Association (JAPIA) (Tomoki Kuwabara)**

ASEAN MRA will start in 2021. JAPIA expect that ASEAN MRA will be deepened, transformed and expanded towards an enhanced MRA. In the future, JAPIA expects all countries here will join the 1958 agreement. This is our final goal and the imagine world. ASEAN MRA is a first step toward imagine world. JAPIA is happy with this progress.

So, JAPIA expects smooth launch of ASEAN MRA. However, we feel uneasy about the launch. We have three concerns: introduction timing, various interpretation and test report description. I will explain this concern in detail and share related knowledge from our experience.

First is, the introduction timing. This example shows detailed schedule from our point of view. The year 2021 is ratification period to incorporate ASEAN MRA into each country's

regulations. At next step, country A adopts part of UNRs, later country B adopts UNRs different from that of country A. However, we cannot use country A's report in country B because the adopted UNRA is different between country A and country B. Effectiveness of MRA test report is limited until 202X. So, our suggestion to avoid this situation is, ASEAN MRA should be set as alternative until all 10 countries complete the introduction. In addition, AAC should set a target date of the UNR introduction and disclose the progress to the public.

Second, various interpretation. This slide shows a typical example. On UNR17 or Seat, there is requirement for non-use position. There are various ways to meet this requirement. For example, the first way is the shape of head restraint. If we do not use correctly, the occupant will feel uncomfortable. The second way is labeling. The occupant informed of this usage with illustration on the label. For this requirement, both ways are okay. However, some technical service may judge one way does not meet the requirement. Our suggestion to avoid such a situation is, it is necessary to set up a working group to share various interpretation like schedule 6 in the 1958 Agreement. Schedule 6 of the 1958 agreement is the procedure for resolving interpretation issues, which AAC consider similar procedure.

Third, test report description. Test report issued by country A is not accepted by country B. Why? We estimate item numbering and requirement title are different. So, the inspector cannot compare at first glance. Description of result and judgment is different. So, the inspector cannot make the same decision. For example, a test report issued by country A shows result by pass or fail only. While test report by country B shows the actual measurement result. Our suggestion to prevent the situation is, common rule for making test report is necessary. Common rules should be set for format, description and judgment.

Now let's share our future image of activity in Asia. We think the harmonization trend will track along the arrow. In the future, we have high hopes that the government and the industry of each country to have a meeting and the opinion raised from the meeting is gathered and proposed to WP29 as Asian one voice. We believe it will bring us more merit.

Let's think imagine and take action toward John Lennon's imagine world. The world will be as one.

## **5. Report from Tyre Industry (Japan Automobile Tyre Manufacturers Association, Inc. (JATMA) (Jun Makino)**

As I explained before, tyre is one of the important vehicle parts in order to support a good function. In order to keep the vehicle safety, UN regulation for tyres were developed under the 1958 agreement. Main requirement is dimension, marking, high speed test, endurance test and so on.

Those UN regulations for tyre safety are globally accepted in the world by not only the Contracting Parties under the 1958 Agreement, but also many other countries.

UN regulations for tyres are also required for the International Whole Vehicle Type Approval and also three UN regulations for tyres such as a UN R30, R54 and R75 are nominated for ASEAN MRA.

In the past, I continuously explained how UN Regulations for tyres are useful and robust enough. Today I'd like to present evolution of UN regulation and international standards for tyres. I have three topics. First one is exclusion of measurement of the outer diameter from radial tyres/run flat tyres after the road/speed performance test. Second one is the removal of technical limitation for marking on the tyre sidewall. Third one is elimination of bead unseating and plunger energy in international standard ISO 10191. So, I will explain accordingly.

First topic. Exclusion of measurement of the outer diameter from radial tyres/run flat tyres after the load/speed performance test. For this activity, tyre industry assessed the actual difference of outer diameter before and after the test. As you can see this table, if the tyre structure is radial tyre or run flat tyre, the difference of outer diameter is very, very small compared to the tolerance  $\pm 3.5\%$ .

Based on these results, we are confident of removal of this requirement from radial tyres /run flat tyres. Therefore, tyre industry submitted the amendment proposal for R30, R54 and R75. The proposal to amend R30 was adopted as supplement 22nd to 02 series in 182<sup>nd</sup> WP.29 session last November and proposal to amend regulation 54 and 75 was submitted to the 183<sup>rd</sup> WP.29 session March this year.

The second topic is the removal of technical limitation for marking on tyre sidewall. Currently, UN regulation for tyre required moulded sidewall marking because this was the only available technology when the UN regulation was established. However, now other technologies are available because of the technical innovation for tyre industry. And alternative solutions was already accepted in the United States.

For example, the laser etching machine is already available and already used in the tyre manufacturing process. Therefore, the tyre industry proposed to amend all UN regulations to remove the wording moulding and those proposals were submitted to the 183<sup>rd</sup> WP29 sessions March this year.

Third topic is elimination of bead unseating and plunger energy. Bead unseating test and plunger energy test is included in ISO 10191. As you can see, bead unseating test is to measure the resistance when bead unseating brock pushed the sidewall. Plunger energy test is to measure the stiffness when plunger pin pushed the thread area.

Both these procedures were developed a long time ago, in 1960s. Tyre industry thinks that those standards are obsolete and not necessary to assure the performance of today's modern tyres, such as radial tyres. Under the ISO activities, ISO Technical Committee 31 is now working to eliminate both bead unseating and plunger energy from ISO 10191. In parallel, tyre industry in United States proposed to NHTSA to eliminate both requirements from radial passenger and light truck tyres.

This is summary of my presentation. Based on these three topics, we are confident that UN regulation for tyres are already useful and robust enough because they are always brushed up on the latest technology. We hope the ASEAN countries will adopt UN regulation for tyres for ASEAN MRA soon.

## **6. Special Session**

### **6-1. Electric Vehicle**

#### **I.Explanation of overall on Electric Vehicle (Kunihiko Kumita, Director of JASIC)**

The purpose of this session is to share the information of EV among Asian countries on regulation of automotive electrification.

Recently, the interest on electrification has been increasing globally. For example, Japan is aiming to cut GHG or greenhouse gases to substantially zero by 2050. To achieve this electrification is quite effective or even essential. In this session, first, I will get touch with the overall picture in accordance with this index shown and ask the floor or participant what is going on in your country. Actually, EV has long history since late 1890s even earlier than gasoline engine. Famous Thomas Alva Edison manufactured factory of EV before Ford T. However, because of inferiority of battery performance, the market had not been grown in a century. The innovation by lithium-ion battery opened the door of the market by improved performance, but safety is concern. Thus, first to build that regulation and standards are quite essential and beneficial to support the electrification of vehicles. Second, the significance of electrified vehicle is mainly related electrified propulsion system that is battery, motor, inverter, those include the high voltage. And some of the electrified vehicles such as a pure EV and plug-in hybrid need infrastructure in charging. This area is covered by standards that ISO and IEC groups managing this.

Another uniqueness in terms of performance of EV is the quietness in motion, which WP29 GRBP or noise expert group is handling this. Here, we simply summarize the safety of the EV the regulatory area. Those are the overall picture of regulations and standards. Yellow portions are regulations and blue portions are standards. Both regulation and standards work together. Again, I say regulation ensure the safety mainly and the standards mainly give the area of compatibility such as charging. By the way JASIC takes care of regulation area.

In order to cope with growing market of EV, United Nation ECE both under 1958 and the 1998 Agreement have been preparing the crucial regulations since early 2000, it was very early stage. The effort was made by many nations involved to create both UN regulations and GTR or Global Technical Regulations. The harmonized regulations are ready.

Asian countries, we all are important international partners. Thus, JASIC supports Asian countries in every respect. We show two major activities here, that is public and the private meeting for all. And expert meeting that gives the more in-depth lecture for each country.

Now, we open the floor to every nation or industry which participate in this meeting. If you have any valuable information or any beneficial information on EV to other Asian countries, please provide with it.

## **[Q & A]**

### **Q1:**

I'm from Vietnam side. I have a question for you. The standard for some pass on the EV should as to tracker system battery in each country. For example, in Japan, Korea, China, they still have a different. So, do we have the idea to MRA in Asia?

### **Kunihiko Kumita**

As shown here, the internationally harmonized regulation on the battery safety is UN R100 for four wheeled vehicles and UN R136 that is the two major safety regulations and standard are these. But the main focus point is UN R100 and R136 on battery safety . We are preparing some of the video or lecture too on those two items.

### **Q2:**

Just for information, currently, at ASEAN level we also considering to harmonize or adopting the R100 and also R136 in the next phase. On top of that, like my colleague from Vietnam as just mentioned, we also looking into the battery development. So, in your presentation you did mentioned about the IEC62660 and also 12405 with regards to the battery development. This is the standard ISO or IEC. But our concern is that since the most of the issue that raised for the for buyer to buy the vehicle is the cost of the EV. And as we are well informed that the battery are contributing majority around 50% to 60% of the total EV cost. So, based on this understanding, we also would like to further explore whether Japan has developed the battery recycling standards for us to consider, for us to study in lowering down the total ownership cost for electric vehicles. So, on top of this ISO/IEC, is there any other standards that are relevant with regards to the battery recycling or remanufacturing?

### **Kunihiko Kumita**

Recycling is out of our scope. However, our METI or Ministry of Economy, Trade and Industry they are handling, taking care of the recycling issue as well. Then we can get back with some information to you on that.

## **II. Video program for UN R100 and R136 (Kunihiko Kumita)**

I will move to the last part of my EV special session. Well, we are unable to hold the expert meeting on face-to-face this year. Thus, as I mentioned, we have created a video program for UN R100 and R136 and in keeping the equivalent quality and effects. We intend to provide with those for everyone who are interested so that they can learn anywhere at any time. So, they just show what this video is just very short time.

[JASIC showed the Video of R100 and R136 for a short time.]

## **6-2. Road Safety**

### **I. Initiative on Road safety in UN (Mr. Walter Nissler, Chief of Section, UN/WP.29 Secretary)**

So, if we look on the activities that we are doing in the transport division in UNECE under the inland transport committee, these are similar activities as you see from our partner or sister organizations like ICAO on the aviation sector or IMO on the maritime sector. So, we have in total a set of 59 conventions in place which are applied more or less by all of the UN member states, so 148 UN member states are Contracting Parties, so there are still, if you look on the map, a few white spots. So, there is also in the east Asian region, still an opportunity to accede to one or the other of our conventions. We have within our conventions a number of those that are directly linked to road safety, not only looking on traffic rules that are under the Vienna or Geneva conventions, but also on safety of vehicles which is the main element of today's presentation.

Now let me have first a look on the global picture on road safety. You all may recall that the UN has set up the policy via the Sustainable Development Goals which is called the Agenda 2030, which should help the global citizens to achieve better life in general. Within these Sustainable Development Goals, two are directly linked to road safety, and there is under the goal for good health, an item that already passed to half the number of global deaths and injuries from road traffic accidents by 2020, and unfortunately, looking at the figures that we have, so far it was 1.36 million fatalities per year and between 20-25 million severe injuries on our roads around the world each year. So, this

goal I think we already did not meet successfully, because looking back, when starting the Agenda 2020, we were around 1.1 million. So, it is still a huge effort needed to increase road safety around the globe.

Now, in the UN and specifically within UNECE, several steps have been taken. Just to recall, that we had the first UN decade for action for road safety from 2011-2020. We have then also a special envoy on road safety nominated by the Secretariat General of the United Nations, Mr. Jean Todt, who is serviced by UNECE and as a third element, we have established the UN Road Safety Trust Fund which should help to put in place activities to enhance road safety in the different countries and the areas around the globe.

Before I go into the detail into this global framework plan of action for road safety, which is basis for decisions taken for funding by the road safety trust fund, I would just like to briefly refer to the general assembly resolution of August 2020, where the general assembly has proclaimed the period of 2021-2030 as the second decade of action for road safety, and already put in a goal for reduction of road traffic deaths and injuries by at least 50% for the time frame of 2021-2030.

So, this is the big goal that the UN will follow, and how to materialize this, this is also in this resolution. But it requests the World Health Organization, WHO and the United Nations Regional Commissions in cooperation of course with other partners in the UN road safety collaboration to prepare a plan of action for the second decade that will guide us to implement elements to reach this goal.

There are also very prominent parts in this general assembly resolution linked to our work related to the safety of vehicles. So, for example, action 10 where the general assembly invites member states to implement United Nations vehicle safety regulations to ensure that all new motor vehicles meet applicable minimum requirements for the protection of occupants and also other road users with for example seatbelt, airbags, active safety systems fitted as a standard equipment.

And also, in point 15, the general assembly of the UN invites the UN members states to establish mechanism for periodic assessment of vehicles to ensure that all new and in-use vehicles comply with basic vehicle safety regulation. So, the general assembly very well has acknowledged the importance of the safety of vehicles to reach the big goal on enhancing goal road safety and reducing the number of road traffic death and injuries by 50%.

Now if we look on the United Nations road safety trust fund where a global framework plan of action for road safety has been established to guide the funding of the different projects. The main element of this global framework plan of action is to establish national road safety systems, and this is based on best practice experience of best performing countries, looking at what they have put in place and how this helped them to enhance road safety to become a better or even best performers.

Now, if we look on this global framework plan of action, it's in principle a matrix that links the different elements that we already know from the decade of action for road safety and interconnected with specific actions. So, it is based on the five pillars: the road safety management which is the overarching team that covers more or less all the activities and then the pillars on the safe users, the safe vehicles, the safe roads, and effective post-crash response. This is now linked, interconnected with actions, actions



related to legislation, to enforcement, to education, to technology for implementing such elements and international regulatory support.

If we look deeper into this matrix, and looking on the area of safe vehicles, we are as you can see on the screen in the safe vehicle line space in the whole matrix and looking on the column of legislation, so there you see rules and standards for admission of vehicles to traffic are recommended to be put in place to achieve a national road safety system. So if we look deeper into this element, there are the recommendations: adopt rules for the registration of vehicles that include strict vehicle inspection schemes; to establish vehicle minimum safety requirements for admission to traffic both for new and also for imported secondhand vehicles, and this should cover more elements well-known by you from braking, electronic stability controls, steering, tyres, lighting devices, safety belts, child restraint anchorages, crash protection against front, lateral and pole-side impact; pedestrian protection, child restraints, helmet, front and rear underrun protection; safety glazing and so on.

Next element from legal requirement would be to put in place a regime for this certification in accordance with the safety requirements that we just have pointed out, and then also a regime for a periodic technical inspection of the vehicles during their use. So first, to have in place the safety requirements, then to have in place the regime for the certification or approval, and then to have also a regime in place for verification whether the vehicles are kept in acceptable condition related to the safety that they have achieved when they have been put on the market.

If we go to the next column on enforcement, so how to enforce this? So there is for example the authorization for inspection centers, or to have checks on different elements on the vehicle, how they are maintained for example by roadside technical checks but also for periodic technical inspections, and also to have import or export controls on new and used vehicles, so export controls for used vehicles is something which we are looking now more in-depth and I will later come on in one of our projects that we are running, and also to have a system for enforcement at the inspection centers to use anti-corruption mechanism and also to assess effectiveness of these enforcement activities by the use of appropriate indicators.

If we go to the next column and the next area which is related to education, so of course, first of all we need to raise general awareness of the safety benefit of the different safety systems and the importance of continuous maintenance and repair of the vehicle, and it should be made very clear in these campaigns that safety elements of a vehicle are not a luxury element, because sometimes vehicle manufacturer always puts in their advertisements that safety systems are coupled with other luxury elements, and you could have let's say road safety systems without seats produced of leather or with other luxury elements because safety I think should be the basic requirement and not luxury.

Of course, campaigns should target also specific groups: for example, if you look on user of 2-wheelers there, of course it would be good to have campaigns for, for example for the proper wearing of approved motorcycle helmets or on the safe transport of children in vehicles by using appropriate child restraint systems. Not only the public needs to be addressed by education, but also those who are doing inspections or doing even the authorization or approval of the vehicle that they are trained on a regular basis to be able to deal with latest technologies.

Now, looking on the international regulatory support that we from the UNECE side can provide and these are our three agreements related to vehicles: the 1958 Agreement on Type approval, the 1997 Agreement dealing with this periodic technical inspection, and the 1998 Agreement on global technical regulations. So, these are the three international agreements or conventions that can guide you and your country in putting in place a regime for safer vehicles.

Just to recall why it is important that there are regulations in place in countries because we have different versions, different models are produced. It starts between left hand drive and right hand drive, versions between US/Canada versions and for example European/Japanese versions. And then there are versions for, let's call it rest of the world, or for countries that have very few or low requirements and then of course you could end up with different behavior for vehicle of the same type, of the same model, that is sold for the same brut price where you will receive as a consumer on what will be on your roads, different safety depending on what your requirement; you may have vehicles without airbags, with lower quality material, even with less welding points, fewer structure components, and then you can see on the two images on the right hand side, where you have the same type, the same model, even the same production year, where in one version I think it is not easy to survive, while the chances to survive in the other version is much higher.

We have taken an initiative by UNECE and also by the special envoy for road safety to have a list of the most important UN vehicle regulations that would make a change to road safety. This is the list that covers not only passenger vehicles; it also covers parts of 2 wheelers and also commercial vehicles. We tried to convince the vehicle industry to commit itself to only build vehicles that would be in compliance with these most important UN vehicle regulations. This ended up after a lot of discussion with this manifesto by OICA that is taken on board more or less these recommended regulations and made it as their product, but I think after my presentation, Mr. Van der Straaten from OICA will give you more in-depth insight in their manifesto.

What is important is that for example on parts of 2-wheelers, and this is something that could be of interest in your area because 2-wheelers are to my understanding one of the main modes of transport in your countries, to also look on enhancing their technical safety conditions for new vehicles to have a look on including ABS in the requirements for parts of 2-wheelers when implementing regulation 78 or corresponding GTR number 3.

Very brief now, the end of my presentation, as one of the latest activities, we are involved in, we are running a project together with our partners from UNEP that is funded by the United Nations Road Safety Fund and it is dealing with safer and cleaner used vehicles for Africa, where the aim of the project is to have a minimum set of requirements for new and used vehicles for Africa, and to put in place policies and regulation systems to ensure compliance with these agreed requirements, and to establish an inspection and monitoring framework, and everything will be accompanied by training, information, and communication activities to support this capacity building at national or regional level in Africa.

**II.OICA Manifesto on Global Road Safety (Mr. Yves VAN DER STRAATEN/OICA Secretary General/Technical Director)**

Let me first briefly explain what OICA stands for: it is the French acronym meaning International Organization of Motor Vehicle Manufacturers. It's a federation now of 36 national or regional vehicle manufacturer associations. We have basically all vehicle manufacturers worldwide all represented in OICA via their respective associations and that covers therefore passenger vehicles, light and heavy trucks, buses, and coaches. Basically, I would say that the manufacturers provide technical expertise while the associations then provide the political expertise, and also take into account the global context, but we are there as OICA in order to take global positions on global challenges and issues. And last but not least, OICA is the official representative on automotive issues in world forums; we are officially United Nations accredited Non-governmental organizations towards various working parties in the UN like WP.1, WP.15, WP.29 and so on.

What are basically the motivations that we had when developing the OICA manifesto on road safety? Well, we have to recognize that road safety is and remains a challenge, and a global one for that matter. Walter Nissler already mentioned about more than 1.3 million people die on the roads every year. Road safety, I should rather say road unsafety is apparently according to the World Health Organization, the leading cause of mortality in low- and middle-income countries. There are more than 50 million injuries in total in road accidents every year. So clearly, this is not acceptable from a social point of view, but also, let's face it, even economically, this road unsafety is very expensive and experts estimate that about 3% of the different country's gross domestic product is lost in road accidents.

So that was already mentioned by Mr. Nissler is really the various UN responses to this challenge. There are a number of resolutions, action plans. The latest one was already mentioned as well, adopted in August 2020, and that follows the Stockholm Declaration of February 2020. So, this goal now is to reduce road traffic deaths and injuries by at least 50% by 2030. That means less than 10 years from. It's clear that a lot of work needs to be done, and we as OICA being the representative of the auto industry at the United Nations, we therefore believe that we do have a role to play.

What is interesting to note is that that was also mentioned already in the previous presentation, there is an increasing recognition among the wheel experts on road safety that there are multiple factors involved, different pillars, different matrices and so on. All these factors have been grouped into five main pillars, but I will not go into the detail on that. But what is really important I think is to recognize that we need an integrated approach looking at all the factors at the same time in order to find the most cost-effective solution. Basically, we do believe and fully agree that road safety must become a general public policy involving road infrastructure, post-crash responses, the vehicle itself of course, but one element is all too often forgotten, and that was also striking to me in the previous presentation is the road user, because he holds the key to everything. Let's face it: a dangerous driver in a very safe vehicle on a very safe road, he will still be dangerous, and this is something we tend to forget unfortunately.

Another point is that in spite of all that, there are some lobby groups which are taking sometimes, let's face it, rather aggressive positions against road vehicles and they sometimes give the impression that the design of new vehicles will be the solution to everything. They call for sometimes radical measures, but they forget first of all the importance of existing vehicle fleets which are sometimes extremely old in many, many countries. They forget the very long time it takes to replace an existing fleet, they forget the importance of considering the economical and social environment, and they continue

to say that the design of vehicles will be the solution to all the problems. We disagree with that, of course, but we have to consider the messages and the attitude from these lobby groups that is something that we indeed need to take into account.

In summary, the OICA manifesto is a contribution to all these questions that I mentioned in relation to road safety and we considered that we needed to give a response to the basic problem, too many people die and suffer on the roads, and different actions must be taken for sure.

As vehicle industry, I already mentioned, we are totally convinced that road safety must be improved, but we are equally convinced that the problem needs an integrated holistic approach and that was already mentioned as well by Walter Nissler, with all factors needing to be considered because all of them are important. Simply addressing one out of the complete list will not only be insufficient, but in some cases, it may even be counterproductive. The list that I have here is probably not even exhaustive, but it is for sure the road user, infrastructure, traffic rules and enforcement, medical care, a good understanding of what causes the accident, consideration to be taken as I mentioned already with existing fleets, existing vehicles, their age, what is the composition, what are the maintenance possibilities in the different markets, and of course, the design of the vehicles for sure. In this respect, it should be clear that vehicle manufacturers are directly responsible for the design of new vehicles that they sell, but they are only responsible for that, this is the only item where we as vehicle manufacturers have a direct influence.

So, one point as well that never should be forgotten is that most accidents are due to human error, more than 90% of all accidents are due to human error, and in order to offset that as much as possible, vehicle manufacturers invest heavily in innovation and modern technology have made new vehicles, current modern vehicles much safer than before. With all these investments, they are much better equipped with driver assistance systems to avoid the accident altogether, but if the accidents cannot be avoided, they also offer a much better protection.

But I will be the first one to recognize that all vehicles in the world are not fully up to date to what I just said. And as industry, we agree that the design of new vehicles is one part of the solution, not a complete solution but it is an element to be taken into account. I think all vehicle manufacturers will also agree that in some cases, the design is clearly outdated in terms of road safety performance, and therefore needs to be improved. But how to do that? We do consider that this commitment that was already mentioned by Walter Nissler as well on a voluntary basis, simply will not be the most efficient approach, because such a commitment will not offer any guarantee that all manufacturers will play the game. Such a commitment will likely result in a competitive chaos. Such a commitment will be very difficult to control, and such a commitment would, last but not least, not be based on the experience that was gained in many mature markets where the minimum needed performance is controlled by the authorities, by the legislation.

The question is what is now the most effective solution to make sure that all these new vehicles at world basis meet a certain level of requirements, and this is exactly the purpose of our manifesto.

What we propose is, as I mentioned already, to use the experience that was gained in a lot of well-developed markets, whereby minimum legal requirements should be put in

place in all markets based on the international experience of the United Nations 58 agreement, 98 agreement and their various regulations. But of course, we also must recognize that other requirements which are well established in some other countries could be a suitable alternative. Walter Nissler already mentioned of course, and that is quite normal, we also fully support UN regulations under the 58 agreement or global technical regulations under the 98 Agreement, but we have to recognize that some countries are not part of these agreements today; I'll come to that point later.

So, we also suggest an in-depth consultation with all the partners that are involved in order to determine the exact content of the requirements that should be put in place and the timing of their implementation. In our manifesto, there is a proposed list of requirements including the proposed timing. That list was not elaborated by me in my legal office. It was elaborated by manufacturers directly as a first-step proposal. Also, I have to insist it should not be considered as a fixed frozen proposal. Local adaptations are absolutely possible, maybe probably even needed in some cases, though both in terms of contents as in terms of timing for implementation, everything will need to be considered locally and adapted locally as well.

So, we do believe that the approach of vehicle legislation has multiple advantages over the idea of a voluntary commitment. Legislation creates a level playing field for all because they apply to all the partners involved. They would be the minimum to be met and manufacturers of course retain all flexibility to meet higher requirements and even at earlier dates, but at least vehicle legislation would ensure free, open, and fair competition. International experience that already exists also says that legal requirements can be controlled very efficiently, contrary to voluntary commitment, which has no control procedures whatsoever.

I also want to stress hearing Walter Nissler's explanation about the whole technical services and so on, I do nothing that all that is needed when in order to develop vehicle legislation. It can be done in a far simpler way and more flexible way. But clearly, it also has a clear advantage. A legislative approach is that there would be certainty for all legal citizens would be better protected. Last but not least, we do believe that any industry sector, and that is not only for the vehicle industry, but any industry that meets internationally recognized standards of a certain quality, they will also gain in competitiveness. That is also an important factor that needs to be considered.

Now, there are a number of recommendations that we have in our manifesto, recommendations to follow when legislation is put in place. I will not go into everything, because everything is explained in all the detail in our manifesto, but it is clear that we need to assess the local situation first of all, in order to well understand the precise road safety problem that needs to be solved, and therefore find the most cost-efficient approach, looking at technical feasibility, logistical feasibility, timing etcetera.

An important facet as well is harmonization and coordination with others. Let's face it, if a country faces a particular issue in terms of road safety, it is very likely that other countries are faced with the same problem or have been. So, you need that specific national requirements should be avoided as much as possible. Another very important item is the fact that vehicle concepts are usually developed for regulatory regimes as a whole. As an example, a vehicle which is destined for the European market will be developed with the European market in mind. So, we therefore strongly caution against what we call cherry-picking, meaning taking one requirement from one particular regime, another requirement from another regime, and mixing all that together because that

would definitely prevent existing vehicle concepts and would require specific unique developers which would be extremely burdensome and extremely complicated.

Last but not least, also a gradual and incremental application of the requirements is likely to be very efficient. There is no need to go straight to the most severe level of the international regulations because on the country, a higher cost of ownership may very well slow down vehicle fleet renewal, and this is definitely something that no one wants to do. What we also need to consider, and that is sometimes forgotten, is the available maintenance infrastructure for sometimes very sophisticated technologies because if you don't have the maintenance possibility of these technologies, it will not be very useful.

The list here is what is today contained in the OICA manifesto of the various regulations that we suggest to be implemented. Again, it is not a must-have, but my experts consider that as a meaningful first list, meaningful for global road safety. In some countries, some of these items may not be necessary. In other countries, other times may be needed as an addition or replacement, whatever. That of course is quite clear, but we do believe that it is a good starting point. And we do believe that if new vehicles placed on the markets everywhere would meet as a minimum, these regulations there, it would be a step in the right direction.

Now, last but not least, the legislative approach that we propose is completely in line with the various UN regulations as that was also mentioned by Walter Nissler, the latest UN Resolution from August 2020 which calls upon all the UN member states to become Contracting Parties to the various UN legal instruments, such as the 1958 or the 1998 agreements, and to implement their safety provisions. We do believe this is the most efficient approach to make sure that new vehicles everywhere in the world meet, as a minimum, a certain set of safety requirements. We do believe that our approach will make sure that the famous pillar that was mentioned, safer vehicles will be achieved, while at the same time, improving sound, fair, and free competition.

So, in conclusion, ladies, and gentlemen, I just want to stress that global road safety is a complex issue involving a combination of various factors, various stakeholders, and all interact with each other and only an integrated approach can provide an efficient solution. The design of new vehicles is not the complete answer, but we recognize, and we insist, it is part of the equation. So, improvement to vehicle design where needed should be done via legislation. It creates a level playing field for everyone. It maintains free and open competition. We strongly support the concept that the 1958 and the 1998 agreements and their requirements or their equivalence. They provide a useful content for national and regional legislation, and we fully agree that all countries should consider acceding to these agreements. Our manifesto provides a first basis for further discussions at national and regional level, as I mentioned, both in terms of content, both in terms of implementation timing and so on. Lot of discussions, and possibly adaptations will be necessary; we recognize that. But we are happy to help local governments and local associations with more information on the various United Nations requirements.

## **7. Closing Remarks (Takahiro Omori, Director General of JASIC)**

First of all, on behalf of JASIC, I would like to express my gratitude to everyone who participated and made presentation today.

In Japan, due to the influence of COVID-19, we are required to have a new way of activities.

I recognize that you are in the similar situation in the world.

Therefore, we decided to hold the forum virtually this time.

Taking advantage of the fact that it is easy to participate in a virtual meeting from anywhere, we were able to have so many people from various places.

All in all, about 250 people have attended this forum.

Thank you very much.

As it is held virtually, I'm sorry that we had to allocate less time than usual due to the time difference.

However, I believe we were able to spend a meaningful time.

Let me briefly reflect on this forum. In the status report held on the first day, we shared efforts to respond to safety and environmental issues and new technologies in each country. In these efforts, international regulations are effectively utilized, and I feel that the results of the discussion about international regulations at WP29, which gathered knowledge from around the world, have been shared.

On the second day, we shared the latest information of activities on ASEAN MRA on Automotive Product. I am happy to hear the progress of ASEAN MRA, especially for the establishment of AAC. JASIC will continuously contribute to the activities.

And we shared the latest information of activities at WP29. Activities on introducing and considering latest technologies like automated driving, advanced emergency braking for pedestrian and bicycles etc. are important achievement and these are very useful to improve safety.

And also adoption of the UN regulation on WLTP for emission is especially important to promote harmonization of international regulations.

After that we shared the latest status of proactive safety and environmental initiatives including promotion of harmonization of regulations in the automotive, parts and tyre industries. We also shared the latest status regarding the discussion on requirements and test procedures in regulations for electric vehicles, which are important as an effort to realize carbon neutral as a global warming countermeasure.

Last but not least, we are informed from Mr. Nissler of the United Nations Secretariat and Mr. Van der Straaten of the Automotive Industry of their global automotive safety initiatives.

Thank you.

In order to realize motor vehicles required in a sustainable society, it is important to take appropriate responses in Asian countries and regions based on the activities shared today.

In view of the importance, we would like to hold this forum continuously in the future.

Next time, I hope that the situation of COVID-19 will calm down and we will be able to hold the forum face-to-face.

I strongly hope I will be able to see you directly.

Having said that, using email to exchange views is very effective way as well.

So JASIC will take care of any questions by email any time.

Please keep in touch.

Thank you very much.