# Chapter 2 Overview of Current Road Traffic Safety Measures

### 1 Improvement of Road Traffic Environment

## Improvement of People-First Walking Spaces Offering Safety and Security

While gaining the cooperation of the local communities, traffic safety measures such as actively improving sidewalks in school routes, residential roads, and main roads in town areas were promoted from the standpoint of "people".

(1) In order to ensure the safety of passage for children and infants attending elementary schools, kindergarten, nurseries, and children's houses, the improvement of sidewalks along school routes were actively promoted.

In addition, improvement was devised for school and kindergarten routes through push-button traffic lights, improving pedestrian lighting and pedestrian overpass, and expanding and augmenting pedestrian crossing.

(2) In March 2009, prefectural public safety commissions and road administrations cooperated to implement comprehensive accident prevention measures and pedestrian improvement in 582 residential and industrial areas with high rates of fatal and injury accidents of pedestrians and bicycles that were assigned as 'Safe Walking Areas'.

Additionally, in residential roads outside of such areas, prefectural public safety commissioners and road administrators worked together to apply the "Residential Road Accident Prevention Measure Manual"\*. Advances were made in preventing speeding vehicles, defining the shape of roads, and making clear the existence of intersections to drivers and traffic sections for pedestrians and drivers. Policies for preventing traffic accidents were implemented to promote the initiative for creating secure road spaces that could be safely shared by pedestrians and drivers.

(3) In order to ensure comfortable and safe passage for pedestrians and bicycle users, the continual improvement of sidewalks and bicycle paths were implemented mainly in conjunction with renovation project-based improvement for areas posing a high risk of traffic accidents to pedestrians.

Furthermore, in order to ensure the self-sustained daily and social lives of the elderly and disabled people, wide and flat sidewalks were actively improved on roads connecting stations, government facilities, hospitals, etc. as based on the new barrier-free laws. In addition, electric pole clearance in conjunction with reconstruction projects were promoted along with the improvement of barrier-free traffic lights, pedestrian overpass with lifting and lowering devices, car parking lots, and car parking lots with parking grids for disabled persons. At the same time, LED lighting and higher brightness for road signs were promoted in order to devise the safety and smoothness of passage for elderly and disabled persons along with adapting to the increase of elderly drivers.

## Application of the Intelligent Transport System

A system unifying people, roads and cars was created using cutting edge information technology, and the realization of improvements in safety, transport efficiency and comfort was promoted along with an intelligent transport system (ITS) designed to contribute greatly to environment conservation through smoothening traffic such as reducing traffic jams. Therefore, based on the overall ITS concept formulated in 1996, the improvement of research development, field testing\*, and infrastructure (social infrastructure) was promoted while working together with industry, government and academia.

<sup>\*</sup> Residential Road Accident Prevention Measure Manual
A document that systematically summarizes procedures for effectively promoting traffic accident prevention in residential roads and techniques for improving road traffic environment.

<sup>\*</sup> Field Testing
Practical tests, outdoor tests, etc.

- (1) Based on actively and furthermore comprehensively managing the flow and stream of traffic with upgraded central traffic control system centers and optical beacons\* capable of two-way communication with individual cars as a medium, advanced road traffic information provision, driving control for cars, priority lanes for public vehicles, reduction of traffic pollution, support of safe driving, and ensuring the safety of pedestrians was devised. Based on the conception of new transport control systems (UTMS) that attempt to secure the safety and comfort of traffic, the implementation of key infrastructure optical beacons was promoted.
- (2) In addition to the functions provided by individual on-board units such as Vehicle Navigation System, VICS and ETC, spot communications enables provision of expanded traffic data or driving safety support, tourist information, and logistics vehicle with single on-board unit, which is called the smart way service. This service has been actively promoted with the launching of roadside unit deployments on highways and initiating the full-scale service.

## Comprehensive Improvement of a Bicycle Usage Environment

While clarifying the role and position of bicycles as an urban transport that corresponds with the urban structure, there is a need to recognize bicycles as a transport method along with pedestrians and cars, ensure safety of bicycles and pedestrians by improving a safe and convenient bicycle path as a network, and to improve the general bicycle usage environment. As a result, bicycle paths and exclusive lanes were improved in "bicycle traffic environment model areas" specified by the Ministry of Land, Infrastructure, Transport and Tourism and National Police Agency in 98 districts nationwide, and deliberation is advancing for every issue and its improvement strategy.

Also, in order to correspond to the new needs for bicycle use, the introduction of community cycling was promoted whereby it is possible to freely loan out and return bicycles in cycle ports established in multiple areas within cities.

### 2 Dissemination and Reinforcement of Traffic Safety Messages

### Promotion of Traffic Safety Education for the Elderly

In order to elevate traffic safety awareness based on the mutual edification of elderly cohorts, the establishment of traffic safety divisions in seniors' clubs and retirement homes as well as the training of elderly traffic safety instructors (silver leaders) was promoted. Also voluntary traffic safety activities such as the creation of "Hiyari maps" were developed, and instruction and support was given so as to fulfill the leading role of traffic safety activities in local areas and households.

## Promotion of the Safe Usage of Bicycles

In order to demonstrate that the bicycle is a vehicle, thus its user need to respect the rules as vehicles and practice traffic etiquette when passing through a road, public awareness-raising activities that apply "5 Rules for Bicycle Safety Usage" shown in the Central Traffic Safety Policy Council Decision were promoted along with traffic safety education such as participatory/revelatory/hands-on bicycle classrooms that target wide bicycle user groups regarding the correct way to ride a bicycle taking into account pedestrians and other bicycles. Such education applies automobile area training courses, audiovisual aids, simulators, and the 'scared straight system' (an experiential educational method that faces fear).

<sup>\*</sup> Optical beacon

A road installation-type infrared communication device. This device senses passing cars to measure the amount of traffic, and communicates data with car navigation devices and traffic control centers.

### **3 Ensuring Safe Driving**

## Augmentation for Better and More Effective Measures for Elderly Drivers

Seminars for the elderly required for elderly people above the age of 70 carry out: practical examinations by getting students to actually drive a vehicle, and testing that utilizes driving aptitude test devices. The aim is to make students self-aware of their own physical changes and giving advice and guidance based on these results. People who take this seminar will not need to attend the seminar when renewing their license. In 2009, senior citizens who attended the seminar added up to 1,833,885.

Furthermore, for seminars at the time of during license renewal, an elderly class was organized targeting people between the ages of 65 and 70, and efforts were made to carry out courses that covered the characteristics of elderly drivers and their traffic accidents.

## Augmentation of Guidance and Supervision of Road Transport Operators

In order to ensure the implementation of laws applicable to the Labor Standards Act and to strengthen traffic management, information is released regarding points of concern in the thorough auditing and supervision of new emerging operators and operators with a history of major accidents. There is also information released regarding the implementation of auditing and supervision based on a combination of authorities concerned with vehicle transport operators, as well as the implementation of combined auditing and supervision and its enhancement.

Furthermore, in order to reduce accidents, strengthen subsequent check functions, and improve the safety of transport by commercial vehicles, amendments were made to vehicle transportation business audit policies and administrative disposition standards. The operators who have been reported as violating minimum wage by the related governmental agencies, and those who caused wheel loss accidents as a result of vehicle fire incidents or breaking wheel bolts are added to the list of targets for the audit, the punishment criteria for drunk driving and failure to subscribe to social insurance was strengthened, and the punishment criteria for the violation of minimum wage was established.

## Augmentation of the Transport Safety Management System

Based on the "Transport Safety Management System" introduced in October 2006, a safety management system was established by the operators which was taken action by management executives to on-the-site workers as a whole. The country carried out the evaluation for transport safety management to 386 companies by the end of December 2009 to confirm the status of implementation.

## **4 Ensuring Vehicle Safety**

### Promotion of Vehicle Safety Measures

In order to facilitate the creation, advancement and dissemination of advanced safety vehicles (ASV) that uses progressive technology to support driving safety, the 4th phase of the advanced safety vehicle (ASV) project was initiated from 2006. With the collaboration of academic, business, and government circles, the initiative for the practical realization of genuine dissemination of ASV technology utilized up to now and communication-based safety driving support systems is being implemented.

In order to prevent accidents resulting from incomplete check and maintenance, such as wheel loss of large-sized vehicle and bus catching fire, the government has continued to conduct intensive checks of large-sized vehicles, newly put into operation in 2007, in September, October, and November including "Promotional Campaign for Motor Vehicle Check and Maintenance" month and has informed about the cautionary items in the check and maintenance of large-sized vehicles such as trucks and buses.

In 2004 the government responded to the need to detect cover-ups and other illicit practices being made by automakers through initiating measures to prevent the recurrence of fraudulent recall-related activities by bolstering the various systems in combating unfavorable information gathering, auditing of defective vehicle-related businesses, and technical inspections, and steadily implemented measures in prevent any recurrence in 2009.

Also, to raise the awareness of automobile users about malfunctions and to prompt the proper use and maintenance of automobiles as well as the taking of appropriate actions for the occurrence of malfunctions, since June 2009 MLIT has started to publish information on accidents and fires caused by malfunctions that automobile manufactures report to MLIT.

### **5 Improvement of Rescue and Emergency Medical Systems**

## Promotion of the "Doctor-Helicopter Business"

For the purpose of augmenting medical treatment during ambulance transport and on emergency sites, doctor-helicopters were in the process of being promoted based on "special law relating to ensuring emergency medical treatment using emergency medical helicopters" established and implemented on June 27, 2007. By the end of January 2010, doctor-helicopters had been deployed to 17 prefectural medical emergency centers.

## Augmentation of Fire Departments and Collaborative Systems for Medical Agencies

In recent years the length of time since a call is made to 119 till an injured or ill person is brought to a hospital has been lengthening. Furthermore, these have been cases with the difficulty of selecting a health care facility that will accept the injured or ill person. Given such conditions, the Fire Service Law was amended in 2009, and the criteria related to the implementation of patient transport and acceptance was decided. Such criteria was decided in order for prefectures to swiftly and appropriately facilitate the transportation of sick or injured people and their acceptance into healthcare facilities as emergency operations through the fire department. Also, a committee is to be established to hold conferences regarding performance standards; the members will be the fire department and healthcare facilities.

### Regarding the Initiative of Municipal Governments for Promoting Two-Seat Bicycles for Use with Infants

Although riding together with an infant on a bicycle has been prohibited conventionally, it has been a common custom regardless of the safety issues. In order to resolve this condition, ensure the safety of bicycle users or surrounding pedestrians etc., and respond to the needs of guardians with infants, riding together with infants on a "two-seat infant bicycle" was accepted in each prefecture in July 2009 as long as safety requirements were fulfilled.

"Acceptable bicycles" are heavy- built in order to strengthen the frame etc. for the purpose of increased safety. Because of the possibility of falling down or the high risk of injury when falling down, it is essential to abide by the traffic rules for bicycles with the understanding of such characteristics as the necessity of making sure the child is wearing a helmet when riding together on the bicycle. In cooperation with related organizations and groups, the police are promoting traffic safety education and public awareness-raising activities in order to promote traffic rules abide by safe "bicycle usage", putting into practice the proper riding style, and protection such as helmets and etc. for all infants.

In addition, because a two-seat bicycle is expensive in comparison to common bicycles, the prefectural police are encouraging the introduction of assistance programs for related municipalities, and activities aimed towards promoting dissemination such as the introduction of assistance programs in related municipalities is being actively promoted.

With regard to the assistance programs, a program assisting with half the cost of purchasing expense of 40,000 yen was introduced in Maebashi, Gunma on July, 2009, and from that point onward the same system has also been introduced in other municipalities. Also, a "prefectural zone program" was first introduced in Saitama on January 2010, and the planning committee formed from the prefectural traffic safety association and prefectural bicycle light motor commerce co-op etc. started operations to assist each purchaser with 30,000 yen per one bicycle (supported by the prefecture and prefectural police). Applications have far exceeded the initial expectations.

A lending system was introduced for the first time in Koga, Ibaraki on September 2009, and in Mitaka, Tokyo the same year in October. In December 2009, a free lending program was introduced in Ichikawa, Chiba and Kumano, Hiroshima, and such a free program has been spreading to Kagawa and Nerima, Tokyo etc.

In addition, in Harima, Hyogo, a two-seat bicycle "test drive" monitor program was introduced. Along with the feeling of safety lending to a monitor, a survey was implemented, and there are various initiatives being carried out in each municipality for facilitating the dissemination of two-seat bicycles including plans to discuss the introduction of a lending system.



## Traffic Volunteers, etc. Involved in Traffic Safety Activities

Traffic volunteers, traffic instructors, and all regional traffic safety activity promotion members etc. fulfilling an important role promoting traffic safety activities to families and regional societies throughout the nation have become engaged in various traffic safety activities, and many traffic volunteers participate also in spring and fall nationwide traffic safety campaign including street activities. A total of 1.1 million people were involved in the spring 2009 campaign, and another 820 thousand people were involved in traffic safety activities in the fall campaign.

Looking towards achieving the traffic safety measure goals of "reducing the number of traffic accident fatalities to below 2,500 people, half of the current traffic accident fatalities, by 2018 and working toward the realization of the safest road traffic around the world", securing and cultivating the traffic volunteer etc. workforce into the future is essential.

#### Traffic Volunteer and other Activities

In order for spreading regional citizen awareness of traffic safety and preventing accidents, distribution of educational products on street activities and traffic safety education that caters to the ages of participants are being implemented. Also, coherent traffic safety activities are being regionally implemented, such as individual visiting for those people, for example elderly people, who cannot easily participate in traffic safety classrooms, providing explanations of the characteristics of traffic accidents and the effectiveness of reflective material etc.



**Traffic Accident Prevention Street Activities** 



Traffic Safety Classroom for Kindergarten Students



Dissemination Awareness Activities for Reflective Material through Individual Visits

#### Education of Traffic Volunteer and etc

In order to train traffic volunteers and promote practical activities to be conducive, every training session is being implemented along with the promotion of regional hands-on activities.

### 1. Implementation of every training session towards traffic instructors etc.

### (1) Traffic Safety Leaders Training Seminars

In relation to street activities for raising awareness of traffic safety among regional citizens and preventing traffic accidents, as well as traffic leaders and volunteers who are implementing traffic safety education, planning for traffic safety awareness-raising activities, teaching methods, and training seminars that focus on lectures and discussions of effective and systematic promotion measures, are carried out. In addition, this lecture becomes a place where quality and consciousness are improved as people in a leading position gather to interact and exchange ideas.

### (2) Traffic Volunteer Activist Block Training Session

In 2009, a training seminar was held in 6 nationwide blocks targeting approximately 800 people for the improvement of qualities and consciousness of traffic volunteers. The seminar mainly focused on regional traffic conditions and characteristics, teaching methods for children and elderly age groups, lectures and training seminars relating to hands-on techniques and discussions. In 2010, the number of target persons will be expanding along with the country being set as 7 nationwide blocks, and the expansion of training seminars will be put into effect.





Holding Traffic Safety Leaders Training Lecture, 2009

### 2. Promotion of practical activities for traffic volunteers etc.

In 2009, with the cooperation of traffic volunteers etc., related organizations and associations, in a compulsory traffic safety education program was implemented regarding seatbelts, the experience of the effects of reflective material etc., in 16 nationwide regions, with participants of approximately 3,400 children, parents (guardians) and elderly people, as three generations of citizens.

In addition, in 23 nationwide regions, traffic volunteers etc. visited approximately 154 thousand households of child-rearing parents and elderly people who are not easily able to participate in every kind of traffic safety awareness-raising activities, and explained in each household the characteristics of accidents and effects of reflective material.

In 2010, projects are implemented to offer places at where volunteer etc. can put together and frame programs which are abound in originality and ingenuity from among experiential, participatory, and practical traffic safety education methods that target children and elderly people that match the traffic conditions and characteristics of every region.

## Regarding Safety Measures in the Ground Transportation of International Maritime Containers

With regard to the ground transportation of international maritime containers, in December 2005, related groups and government agencies cooperated and instituted the "International Maritime Container Safety Transport Guidelines on Land". However, accidents are still occurring continuously such as rollover accidents involving international maritime containers even after the issue of guidelines.

Factors for the international maritime container rollover accidents include the speeding trailer, failure of the containers to remain fixed to the trailer, accidents caused by the driver of the container and etc. In addition to the factors attributed to the driver based on not being able to confirm the condition of the container contents, a variety of factors are presumed including the occurrence of overloading.

With regard to these issues, awareness is being shared with the cooperation of affiliate related departments in the Ministry of Land, Infrastructure, Transport and Tourism, truck company, terminal operator, forwarder, chartering broker, and related members of the shipping company etc. In order for discussion to move forward in relation to possible specific safety measures in the future, the "International Maritime Container Safety Measure in Land Transport Review Meeting" was established in December last year, and discussion was held for more safety measures. Based on the results, the "Bill Relating to the Safety and Security of the Vehicle Transport of International Maritime Container Integrated Transport" was decided in the cabinet in March 5<sup>th</sup> this year, and a summary is shown below.

#### 1 Transmission of container data

### (When Importing)

- The consignee requests provision of the container weight and stowage information etc. for the foreign shipper.
- The container material information and weight and stowage information from the foreign shipper etc. are sequentially transmitted from the consignee to the chartering broker, from the chartering broker to the truck company, and from the truck company to the truck driver.
- When the weight amount information is unobtainable, the consignee measures the weight and takes steps transmit the results.

### (When Exporting)

● The shipper sequentially transmits the container item/weight/stowage information to the driver.

### 2 Discovery and revision of import containers in an improper state at the port

- When there is a request from the truck company, the shipper implements the necessary equipment for discovering or correcting the improper containers.
- ●The minister of Land, Infrastructure and Transportation establishes policies for discovering or correcting improper containers.
- Authorized officials are able to hold a conference for discovering and correcting improper containers for every port and pier.

### 3 Compliance items for the truck operator and driver

- The truck operator cannot order or approve the transport of improper containers. Advice is sought from the shipper who gave instructions for this.
- ●The truck operator and driver implement the safe operation and container lock based on the container information.

\*The items above are implemented sequentially according to the contents.

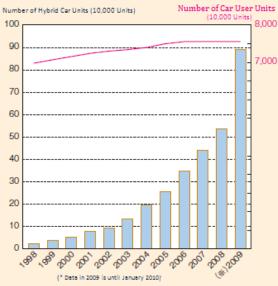
Conditions of Rollover Accidents of Container Semi-Trailers Carrying International Maritime Container

	Imported Containers	Exported Containers	Total
2006	6	0	6
2007	3	5	8
2008	3	2	5
2009	5	3	8
Total	17	10	27

(10 fatalities and 8 severe injuries from 2006 to 2009)

## Regarding Measures Connected to the Quietness of Hybrid Vehicles, etc.

The number of registered hybrid cars and electric vehicles has been increasing in recent years and they are expected to increase even further in the future. In the meantime, since feedback was received from car users and organizations for people with impaired vision etc. that these cars "feel dangerous when they don't emit sound", experts were gathered from various areas such as academics, organization for people with impaired vision, organization for manufacturers etc. from July 2009 and held a committee meeting where discussion was advanced for measures relating to the quietness of hybrid cars. The committee grasped the accident situations, the number of vehicles owned, overseas conditions, the condition of discussions so far and the committee also held a trial meeting that used hybrid cars and electric vehicles, and it was confirmed that it was possible to barely notice or not notice at all when approaching to these vehicles. In relation to this confirmation, various discussions were advanced including the viewpoints that countermeasures were not necessary if drivers exercised caution, and that countermeasures should be used based on new technology other than sound emission.







Transition of the Number of Promoted Hybrid Cars

A Photo of People Experiencing the Hybrid Car in Use

As a result, the committee summarized the "(Report) Measures Regarding Countermeasures Relating to the Quietness of Hybrid Vehicles etc." in January 2010, and while it was important that drivers exert the utmost caution and drive without making pedestrians feeling danger, this by itself was not enough to be able to correspond to the unpredictable actions of pedestrians. While the superior quiet performance of hybrid cars was taken advantage of, in order for pedestrians including visually impaired people to be able to precisely grasp their positional location to the car, it was requested that sound emitting devices that fulfilled certain requirements be equipped in hybrid vehicles etc.

The Ministry of Land, Infrastructure, Transport and Tourism received this request, and in addition to deciding the "Guidelines for Measures Relating to the Quietness of Hybrid Cars", officials from vehicle manufacturers were informed, and early dissemination of the measures was urged.

Applicable Range: Electric Vehicle-capable hybrid car, electric vehicle, etc.

Measure for Setting: Speed range from 0km/h to 20km/h, reversing

Sound Type: Sound evoked when traveling, changes noise depending on

speed

Volume: Same extent as normal engine

Method of Emitting Sound: Automatic regular sound emitting system. Turning off sound

emitting temporary (However, returning from turning off,

injector lamp are necessary)

Outline of Quietness Countermeasures Guideline

Hence, it is taken up as a goal to internationalize the things related to low sound hybrid cars etc which are expected to disseminate across the world in the future: for example based on the validation results of the technological and social acceptability of cars that fulfill the guidelines, standardization are taken into consideration. In the "World Forum for Harmonization of Vehicle Regulations (UN/ECE/WP29)", a UN conference that carries out international harmonization activities for safety and environmental standards of cars, Japan proposed the contents of the measures.

## About the First Global Ministerial Conference on Road Safety

From November 19-20, 2009, the "First Global Ministerial Conference on Road Safety" based on the resolution of the  $62^{nd}$  session of the U.N. General Assembly, was held for two days in Moscow (Russia), and governments of 150 nations including Japan, 20 international organizations, and 80 NGOs participated.

The reason why so many countries and organizations participated in the conference was that: as reported in the "World report on road traffic injury prevention" (World Health Organization/ World Bank, 2004), if the countries around the world do not cooperate and deal with this issue quickly, it is expected that this will become a cause for traffic accidents to account for the largest proportion of deaths in the entire world by 2020. It reflects that there is a growing threat across the globe.

At the meeting, Japan participated in the panel discussion, where introduced approaches in Japan, heard the approaches of other countries, and exchanged viewpoints, regarding future measures. Furthermore, Japan also participated in the Plenary Session, with the developing countries where number of traffic accident fatalities continues to increase, and developed countries which achieved to reduce the number of traffic accident fatalities, and discussed about the advancement of further approaches for securing traffic safety throughout the world.

With the consideration of the intent of the adopted Moscow declaration in this meeting, in the future, further traffic safety measures need to be taken in Japan.



Condition of the Panel Discussion



Condition of the Plenary Session

First Global Ministerial Conference on Road Safety: Time for Action

### Moscow, 19-20 November 2009

Moscow Declaration (Tentative Translation) —Extract—

## Hereby resolve to:

- 1. Encourage the implementation of the recommendations of the *World report on road traffic injury prevention*,
- 2. Reinforce governmental leadership and guidance in road safety, including by designating or strengthening lead agencies and related coordination mechanisms at national or sub-national level;
- 3. Set ambitious yet feasible national road traffic casualty reduction targets that are clearly linked to planned investments and policy initiatives and mobilize the necessary resources to enable effective and sustainable implementation to achieve targets in the framework of a safe systems approach;
- 4. Make particular efforts to develop and implement policies and infrastructure solutions to protect all road users in particular those who are most vulnerable such as pedestrians, cyclists, motorcyclists and users of unsafe public transport, as well as children, the elderly and people living with disabilities;
- 5. Begin to implement safer and more sustainable transportation, including through land-use planning initiatives and by encouraging alternative forms of transportation;
- 6. Promote harmonization of road safety and vehicle safety regulations and good practices through the implementation of relevant United Nations resolutions and instruments and the series of manuals issued by the United Nations Road Safety Collaboration;
- 7. Strengthen or maintain enforcement and awareness of existing legislation and where needed improve legislation and vehicle and driver registration systems using appropriate international standards;
- 8. Encourage organizations to contribute actively to improving work-related road safety through adopting the use of best practices in fleet management;
- Encourage collaborative action by fostering cooperation between relevant entities of public administrations, organizations of the United Nations system, private and public sectors, and with civil society;
- 10. Improve national data collection and comparability at the international level, including by adopting the standard definition of a road death as any person killed immediately or dying within 30 days as a result of a road traffic crash and standard definitions of injury; and facilitating international cooperation to develop reliable and harmonized data systems;
- 11. Strengthen the provision of pre-hospital and hospital trauma care, rehabilitation services and social reintegration through the implementation of appropriate legislation, development of human capacity and improvement of access to health care so as to ensure the timely and effective delivery to those in need;

Invite the United Nations General Assembly to declare the decade 2011–2020 as the "Decade of Action for Road Safety" with a goal to stabilize and then reduce the forecast level of global road deaths by 2020;

Decide to evaluate progress five years following the First Global Ministerial Conference on Road Safety;

Invite the international donor community to provide additional funding in support of global, regional and country road safety, especially in low- and middle-income countries; and

Invite the UN General Assembly to assent to the contents of this declaration.

Moscow, Russian Federation

20 November 2009