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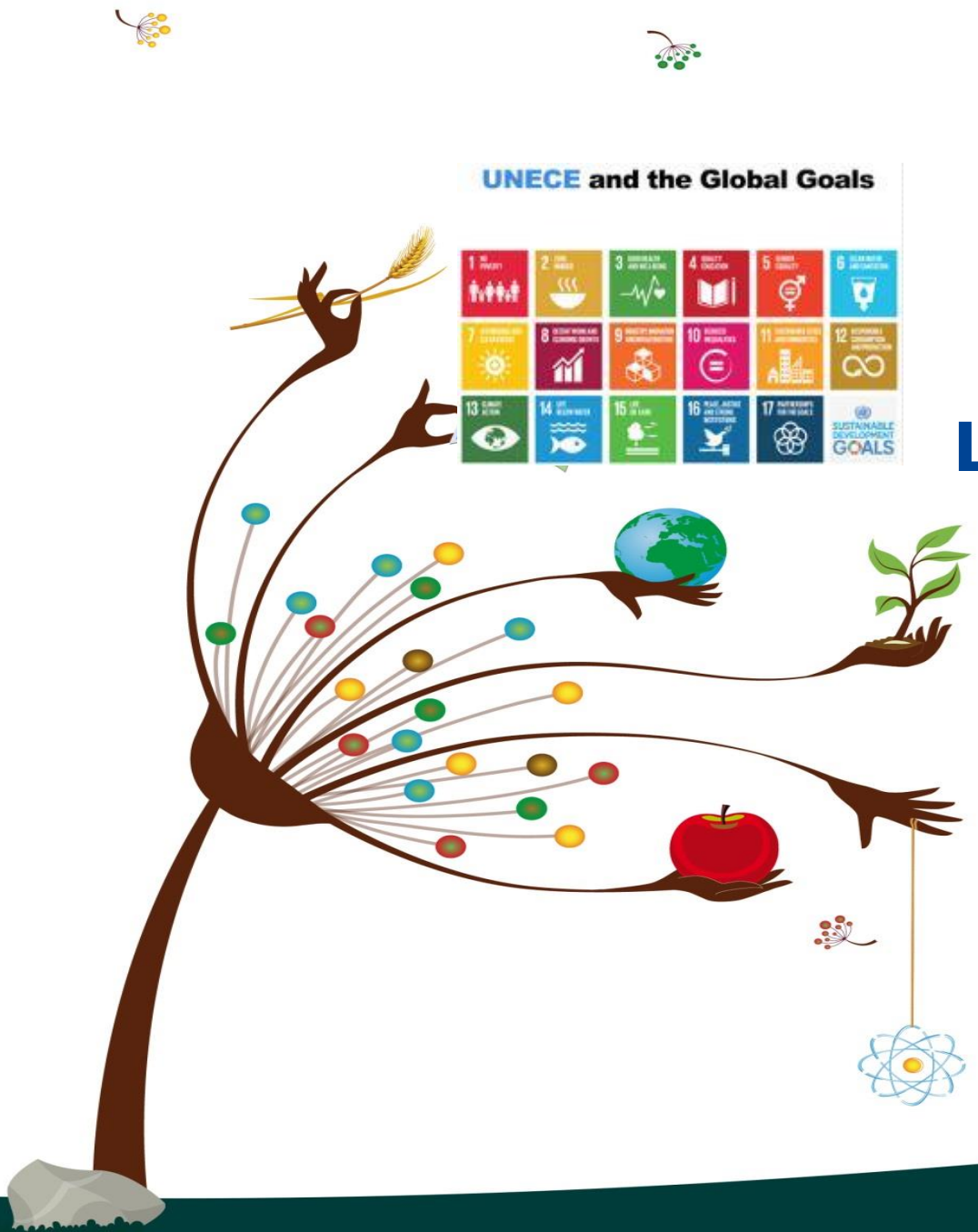
Joint Research Centre

Low T TF -Progress Report WLTP 25th 8th Jan 2019 - Geneva

Low and Realistic Winter Temperature TF

C. Astorga

UNECE and the Global Goals



European
Commission

Minutes of the 22nd f2f - Low Temperature Task force

Date	PARIS - November, 19-20 th (2018)
Document	LowT 22-01 – Draft* MINUTES

Following the request of some members of the TF, previously to the f2f meeting, and regarding the timeline of this TF, the Chair included in the agenda a point on

“LowTemp timeline: alignment with WLTP”

Technical Chair of the WLTP iWG, was invited to present the time line of WLTP iWG as it appears in WLTP document “schedule of WLTP phase 2” [**]

** This document has been distributed by mail to the TF Members for revision (no comments received on deadline 20th Dec). All the information contained in this progress report can be found in that document.*

*** A copy of that excel file can be found in the minutes of this TF corresponding to 16th March 2018- Telco no. 17th)*

Copy of Proposed Schedule of WLTP Phase2b_rev2;

See entry #8 = Low Temp

#	ITEMS	proposed by	Justification of proposed time schedule	2017												2018												2019												2020											
				10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12									
Phase2b original schedule				78th GRPE																																															
New proposal of Phase2b				82nd GRPE																																															
3	GTR #15, #19	Amendment																																																	
4	NEW GTR	Low Temp, OBD, others																																																	
5	Cycle	Gear Shift																																																	
6		Trace Indices	same timing as UNR(Type1)																																																
7		HEV System Power	EVE validation test will be completed in fall 2018																																																
8	Supplemental Test	Low Temp																																																	
9		Crankcase & Idle	same timing as UNR(Type1)																																																
10	Evapo.		no specific requirement from CPs. Re-open from 2019 due to manpower shortage																																																
11	Durability	ICE	2 steps approach, (1) same timing as UNR, (2) new, if needed																																																
12		Battery	wait and see the current study due to technical difficulty																																																
13	OBD		OK if completed by 2020 (EU prohibit NEDC demonstration)																																																
14	COP		same timing as UNR(Type1&IV)																																																
15	ISC		consider each region current process																																																
16	New Open Issues	Family definition	ICCT	avoid confusion(keep current process) until next development cycle																																															
		Improvement of R/L determination		same timing as UNR(Type1)																																															

Source:
 Minutes of the 17th TelCo- Low Temperature Task force
 LowT 17-02 - Draft MINUTES/ March, 16th (2018)

GTR drafting & report on Progress

CP Switzerland pointed out that the group has to address a list of technical points before writing the new GTR.

A discussion on the bases of a drafting document took place in the meeting. Several options could be considered for the Low T GTR.

GTR information and how to proceed:

other regulatory processes and the example of the GTR 15

Rob Gardner (Coordinator of the Transposition TF) was invited by the Chair to present a summary on the state of play in the transposition of the GTR 15 into UN Regulation under the 1998 and 1958 agreements.

Chair clarified that TF was requested (by the GRPE) to produce a “standalone” GTR document (not an Annex of the GTR 15).

This question was already done in the TF months ago, then raised by the Chair to the WLTP IWG and answered from the secretary of the GRPE.

Progress in the LowTemp TF 2018

- The Chair presented a series of slides that summarize the work flow up to now and showed that:
- a general procedure to measure emissions (Type I criteria pollutants and CO₂) from pure ICE, NOVC-HEV and OVC-HEV was proposed (by JRC and EC). However, there has not been developments for PEV and what concerns to range, energy consumption and CO₂ emissions from OVC-HEV.
- To this point, EV Tech secretary pointed out that there are general points that need to be clarified before SG-EV will be able to work on these points.
- JAMA pointed out that the group need to know the purpose of the Low T procedure.
- Chair reminded that the members of this TF prepared a questionnaire addressed CPs. CPs replied to this, and other similar questions in that questionnaire submitted in 2016 (final version of the answers of the CPs is available since early 2017).

GTR Drafting Group of UNECE WLTP Low and Realistic Winter Temperature Task Force - **start up in June 2018**

1st f2f GTR Drafting Group Meeting - Geneva, Palais des Nations, 07.06.2018

During the meeting, the group went through a presentation prepared by the coordinators of drafting process (Switzerland-CP) and agreed on priority of some open points.

A short summary of the priorities set during the meeting is shown in the table below.

Table 1: Priorities set according to presentation “Low Temp meeting at UNECE June 7, 2018”

Slide No.	Subject	Priority / Comments
3	Annex 1 (Cycles): drive cycle	Priority 1
9	Annex 6 (Test procedure)	Priority 1
13	Annex 6 (Test procedure): road load increase	Priority 1
10	Annex 6 (Test procedure): no. of tests, ect.	Priority 1.5
11	Annex 6 (Test procedure): test cell temperature	Priority 1.5
12	Annex 6 (Test procedure): soak area temperature	Priority 1.5
5	Annex 3 (Test fuel)	Priority 2
7	Annex 5 (Test equipment): dynamometer bearings	Priority 2
8	Annex 5 (Test equipment): non-criteria emissions	Priority 2
4	Annex 2 (Shifting): shifting problems	Drivability will be addressed once the drive cycle is finalised
6	Annex 4 (Road load)	See slide no. 13
2	Auxiliary devices	Proposal by subgroup
14	Annex 7 (Calculations)	For information

Details and notes, refer to the presentation “Low Temp meeting at UNECE June 7, 2018”, which was updated by the drafting coordinator.

Proposals presented during the f2f meeting LowT Paris Nov 2018 (1)

CP-CH (P. Bonsack) presented a series of proposals for the **points** (most of them technical, but not only) previously seen in the table which are **marked as priority 1 and 1.5**.

The proposals included: name of the GTR (which was agreed), cycle (4 phases WLTC) test procedure (including, preconditioning temperature (T) soaking time (t) and temperature, test temperature and range of the temperatures), family concept (focused on pollutant emissions control systems, not CO₂ based).

The document that gathers all the proposals as well as comments was distributed to the group.



Schweizerische Eidgenossenschaft
Confédération suisse
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Swiss Confederation

Federal Department of the Environment,
Transport, Energy and Communications DETEC
Federal Office for the Environment FOEN
Air Pollution Control and Chemicals Division
Traffic Section

Swiss Proposals

to the UNECE WLTP Low & Realistic
Winter Temperature Task Force

Paris, 19.-20.11.2018

Giovanni D'Urbano, Peter Bonsack – FOEN

- Proposal 1: Name for the UN GTR
- Proposal 2: Annex 1 (Cycles): Drive Cycle
- Proposal 3: Annex 6 (Test Procedure); Road Load Increase
- Proposal 4: Annex 6 (Test Procedure) *Specifics*
- Proposal 5: Family Concept

This document was distributed by mail to all TF member.

No comment received from any TF members until deadline of 11th of Dec

Proposal is now loaded in CIRCA BC - for further discussion inside the LowT TF (Early 2019)

Proposals presented during the f2f meeting LowT Paris Nov 2018 (2)

JRC (R. Suarez) presented a proposal for the test procedure (including, preconditioning temperature (T) soaking time (t) and temperature, test temperature and range of the temperatures) pure ICE, NOVC-HEV and OVC-HEV.

Most of the points presented were in agreement with CP-CH, with some differences in the coast down and preconditioning temperature. The proposal also included some considerations for K factors of NOVC-HEV and OVC-HEV.

This document was shared with the TF members together with CP-CH document (see previous slide)



EUROPEAN COMMISSION
JOINT RESEARCH CENTRE (JRC)
 DIRECTORATE FOR ENERGY, TRANSPORT & CLIMATE
 SUSTAINABLE TRANSPORT UNIT

JRC proposal to Low-T TF 22nd meeting f2f 1

Subject	Priority ¹	Proposal EU
Drive cycle	1	WLTC: L-M-H-ExH
Test procedure	1	Type 1/US 1166 –like ²
N° of tests and Calculations	1.5	As described in Annex 6 GTR-15
Test cell T (°C)	1.5	-7.0 ± 3.0 at start
Soak area T (°C)	1.5	-7.0 °C ³
Shifting problems		
Test fuel	2	LowT TF 16th Meeting Dec 12&13-2017 Presentation JRC_Fuels_V1.pdf
Road load		As in Reg. 83 and US 1066
Dynamometer bearings	2	
Auxiliary devices		TBD
Non-criteria emissions	2	TBD

*This document was distributed by mail to all TF member.
 No comment received from any TF members until deadline of 11th of Dec
 Proposal is now loaded in CIRCA BC - for further discussion inside the LowT TF
 (Early 2019)*

Working documents available and ready for discussion inside lowT TF (1)

- **In Summary: CH and EC-JRC proposal remarked the need of 4 phases/ WLTC while JPN expressed the preference for 3 phases/ JPN WLTC. Therefore, at current state a regional option may be presented.**
- **After the f2f meeting in Paris, TF members were expected to provide their comments on these 2 documents; a final proposal should be created with those comments, if any *(No comments received by this chair and docs are already loaded and available in CIRCA now)***

Working documents available and ready for discussion inside lowT TF (2)

1. In addition to the documents presented by CP Switzerland and JRC, another document was presented by JPN which provided an overview of the current status of the work done.
2. As it was mentioned in the LowT TF f2f meeting (Nov 2018) and reflected in the minutes, a new document has been produced and it is available now:
3. This list contains all issues appearing in the document created by the drafting coordinator, S Dubuc on the 17th of September (Tokyo WLTP 24th) and has been already revised. Comments from the Japan, CP-CH, TF Chair and JRC have been already received and processed: **WLTP Low Temp TF - List of working items - draft status** (category: working document*)
4. Final version has been distributed to the TF (*mail from Chair on the 20th of Dec; Expected deadlines for the actions will be shared and discussed with the TF members early in 2019*)

* Date of submission by mail to all TF members 20th of Dec 2018

- **Comments on the proposals and working document WLTP Low Temp TF - List of working items - draft status:**

In the part referred as “Test Procedure (EVs)” Not all the items already included under “Test Procedure (pure ICE)” are listed , since we think that SG EV experts should come up with proposals in this area.

- SG-EV is expected to provide an extensive list of opened points related to electrified vehicles. The Chair and CH requested that, once available, the SG-EV should also provide the input to the priority list of issues to be discussed (see slide above).
- The Chair expects the SG-EV to provide a proposal on how should range, efficiency and energy consumption from electrified vehicles be evaluated at -7C by March 2019 (no need to include NOVC-HEV which will be tested as a pure ICE using Type I correction factor, unless SG-EV suggests differently).
- The TF members were informed that until then the Chair will not call for a new f2f meeting.
- SG-EV will invite for a meeting to ask input on PEV evaluation at -7C.

WLTP Low Temp TF - List of working items - draft status (category: working document*)

This consolidated list of working items will help satisfying the purpose of a better overview.

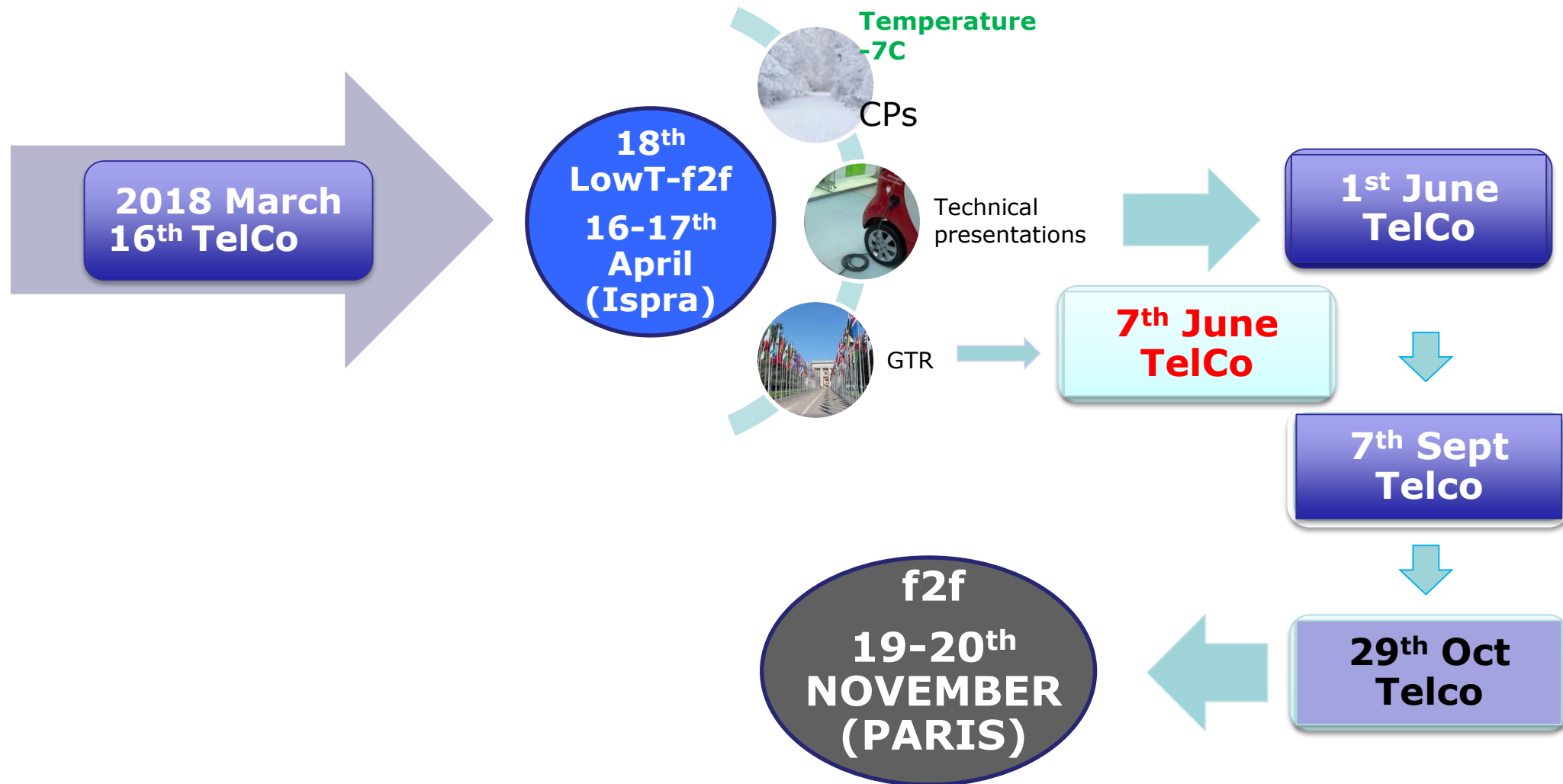
The document will help us on tracking our discussion and decisions regarding all these items within the WLTP Low Temp TF in the coming months.

** Date of submission by mail to all TF members 20th of Dec 2018*

Auxiliary devices & LowTemp

- CLEPA (Ch. Petitjean) presented the current state of play on the selection of devices that are considered Auxiliary devices under the current definition, that are affected by the cold (-7C) ambient temperature and can lead to impacts on vehicle emissions and range. It was suggested to include in his approach two lines that will help to decide on the applicability: one that considers the worst case, and the other the common use.
- During the presentation, it was pointed out that peripheral devices definition may change in the upcoming months. Nonetheless, the work will continue as it is unless the auxiliary devices considered are affected by these changes.
- It was discussed if additional burners should be considered in this frame, but Sweden pointed out that they are covered by Reg 122, which consider their emission, and should not be considered as Aux dev.
- As a next step CLEPA will provide an approach to evaluate the devices as their effect during: soaking-precondition-running

calendar of dates for telco and f2f meeting during 2018



Further Progress in the discussions for low Temp procedures during next year:

- *1st part - Proposal for ICE test procedure & 2nd part - proposal for a test procedure for hybrid vehicles & emissions; **Good progress during 2018 and proposals ready for discussion***
- *GTR drafting coordinator and process: launched and on-going (CH – CP is coordinating and leading this process)*
- *One document has been produced and circulated on the 20th of Dec to TF members:*

WLTP Low Temp TF - List of working items - draft status

This document will help us on tracking proposals, discussion and decisions regarding all items within the WLTP Low Temp TF in the coming months

- *3rd part - Discussion for a proposal for a procedure Electric vehicles (2019)*
- *4th part –EV LowTemp range and Information to the customers*

WLTP - EV subgroup Experts have received the request (f2f meeting Paris Nov 2019) to prepare a proposal to the LowTem TF.

The Chair of the LowT TF highlighted that Annex 8, in relation to all possible issues concerning lowT should be revised inside the SG-EV.

<https://www.un.org/sustainabledevelopment/>

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Urgent action is needed to mobilize, redirect and unlock the transformative power of trillions of dollars of private resources to deliver on sustainable development objectives. Long-term investments, including foreign direct investment, are needed in critical sectors, especially in developing countries. These include sustainable energy, infrastructure and transport, as well as information and communications technologies. The public sector will need to set a clear direction. Review and monitoring frameworks, regulations and incentive structures that enable such investments must be retooled to attract investments and reinforce sustainable development. National oversight mechanisms such as supreme audit institutions and oversight functions by legislatures should be strengthened.



Facts and figures

Goal 17 targets

Links

- Official development assistance stood at \$135.2 billion in 2014, the highest level ever recorded
- 79 per cent of imports from developing countries enter developed countries duty-free
- The debt burden on developing countries remains stable at about 3 per cent of export revenue
- The number of Internet users in Africa almost doubled in the past four years
- 30 per cent of the world's youth are digital natives, active online for at least five years
- But more four billion people do not use the Internet, and 90 per cent of them are from the

SDG GOALS



Thanks



Any questions?
You can contact
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