

# INTERNATIONAL TELECOMMUNICATION UNION



## Questionnaire Update EUR RI meeting

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# Background

- The Questionnaire was developed after the **ITU Regional Seminar for Europe on Transition to Digital Broadcasting and Digital Dividend** held in Budapest, Hungary, on 5-7 November 2012.
- Council 2014 requested ITU to provide an analogue to digital switchover stocktaking for assisting the Member States in their transition process
- Although many European countries completed transition from terrestrial analogue to terrestrial digital TV, but there are some countries which are still in the process of transition. Process should be completed by 17 June 2015 (Final Acts of RRC-06)
- In order to get relevant updates and new information, BDT prepared letter which has been sent 10 October, 2014 to competent authorities of European countries. A reminder was sent on 9 December 2014.

## **ITU Expert: Momcilo Simic (Serbia)**

- Latest update based on the replies: 23 February 2015, for SEE countries  
12 January 2015

# Replies from countries as of 23 February 2015

Country name	Year Of Launch	DSO Date	TV Standard	Compression Format	Status
1-Albania		17/06/2015	DVB-T2	MPEG-4	Ongoing
2-Andorra	2006	25/09/2007	DVB-T	MPEG-2	Completed
3-Austria	2006	2011	DVB-T DVB-T2	MPEG-2 MPEG-4	Completed
4-Belgium	2002	2008	DVB-T DVB-T2	MPEG-2	Completed
5-Bosnia and Herzegovina		01/12/2014	DVB-T	MPEG-4	Not started
6-Bulgaria	01.03.2013	30.09.2013	DVB-T	MPEG-4	Completed
7-Croatia	2009	2010	DVB-T DVB-T2	MPEG-2,MPEG-4	Completed
8-Cyprus	2010	01/07/2011	DVB-T	MPEG-4	Completed
9-Czech Rep.	2005		DVB-T	MPEG-2 MPEG-4	Completed
10-Denmark	2006	31/10/2009	DVB-T DVB-T2	MPEG-4	Completed
11-Estonia	2006	2010	DVB-T DVB-T2	MPEG-4	Completed
12-Finland	2001	2007	DVB-T DVB-T2	MPEG-2 MPEG-4	Completed
13-Former Yugoslav Republic of Macedonia	2008	31/05/2013	DVB-T	MPEG-4	Completed
14-France	2005	2011	DVB-T	MPEG-2 MPEG-4	Completed
15-Germany	2002	2008	DVB-T	MPEG-2	Completed
16-Greece	2008	29/12/2014	DVB-T	MPEG-4	Completed
17-Hungary	2008	2013	DVB-T	MPEG-4	Completed
18-Iceland	2014	2015	DVB-T DVB-T2	MPEG-2 MPEG-4	Ongoing
19-Ireland	2011	24/10/2012	DVB-T	MPEG-4	Completed
20-Israel	2008	2011	DVB-T	MPEG-4	Completed
21-Italy	2004	2012	DVB-T DVB-T2	MPEG-2	Completed
22-Latvia	2009	2010	DVB-T	MPEG-4	Completed
23-Liechtenstein*					
24-Lithuania	2008	2012	DVB-T	MPEG-4	Completed
25-Luxembourg	2006	2006	DVB-T	MPEG-2	Completed
26-Malta	2005	2011	DVB-T	MPEG-2	Completed
27-Monaco*					
28-Montenegro	2014	17/06/2015	DVB-T2	MPEG-2	Ongoing
29-Netherlands	2003	2011	DVB-T	MPEG-2	Completed
30-Norway	2008	2009	DVB-T	MPEG-4	Completed
31-Poland	2009	2013	DVB-T	MPEG-4	Completed
32-Portugal	2009	2012	DVB-T	MPEG-4	Completed
33-Romania		17/06/2015	DVB-T2	MPEG-4	No info
34-San Marino	2007	2011	DVB-T	MPEG-2	Completed
35-Serbia	2014	17/06/2015	DVB-T2	MPEG-4	Ongoing
36-Slovak Republic	2009	2012	DVB-T DVB-T2	MPEG-2 MPEG-4	Completed
37-Slovenia	2006	2011	DVB-T	MPEG-4	Completed
38-Spain	2000	2010	DVB-T	MPEG-2	Completed
39-Sweden	1999	2007	DVB-T DVB-T2	MPEG-2 MPEG-4	Completed
40-Switzerland	2001	2008	DVB-T	MPEG-2	Completed
41-Turkey		2015	DVB-T2	MPEG-4	Not Started
42-United Kingdom	1998	2012	DVB-T DVB-T2	MPEG-2 MPEG-4	Completed
43-Vatican	2012	2012	DVB-T DVB-T2	MPEG-2MPEG-4	Completed

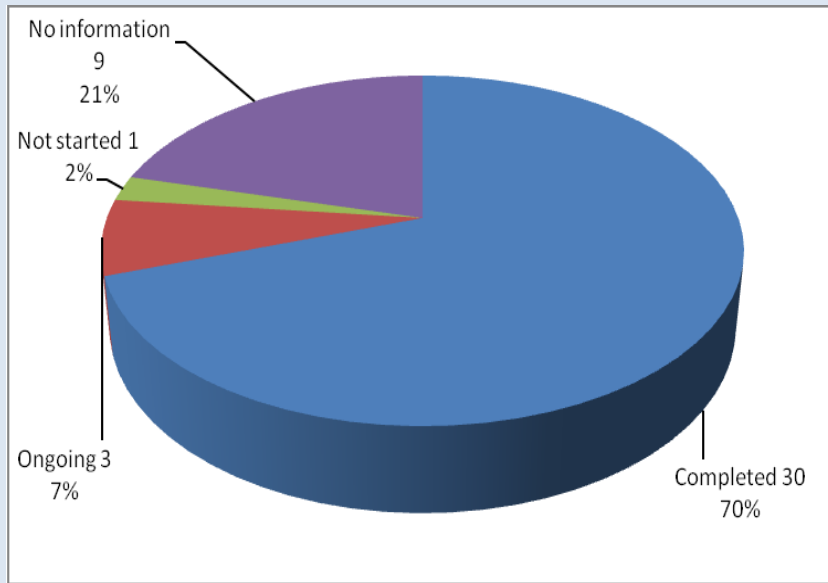
# Replies from SEE countries as of 12 January 2015

Country	Year Of Launch	DSO Date	TV Standard	Compression Format	Status
1-Albania		17/06/2015	DVB-T2	MPEG-4	Ongoing
2-Bosnia and Herzegovina		01/12/2014	DVB-T	MPEG-4	Not Started
3-Bulgaria	01.03.2013	30.09.2013	DVB-T	MPEG-4	Completed
4-Croatia	2009	2010	DVB-T DVB-T2	MPEG-2 MPEG-4	Completed
5-Cyprus	2010	01/07/2011	DVB-T	MPEG-4	Completed
6-Former Yugoslav Republic of Macedonia	2008	31/05/2013	DVB-T	MPEG-4	Completed
Greece	2008	29/12/2014	DVB-T	MPEG-4	Completed
Montenegro	2014	17/06/2015	DVB-T2	MPEG-2	Ongoing
Romania		17/06/2015	DVB-T2	MPEG-4	No info
Serbia	2014	17/06/2015	DVB-T2	MPEG-4	Ongoing
Slovenia	2006	2011	DVB-T	MPEG-4	Completed
Turkey		2015	DVB-T2	MPEG-4	Not Started

# Status

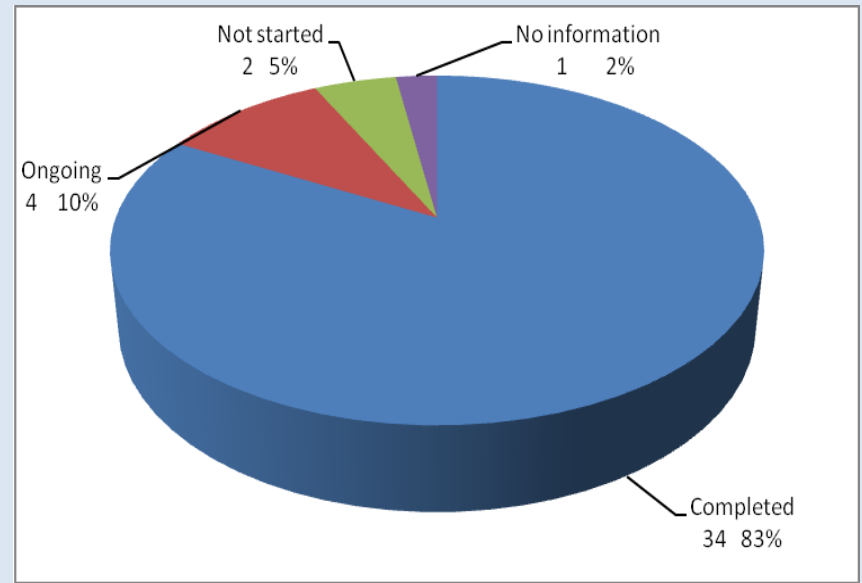
Before 10 October 2014

	Completed	Ongoing	Not started	No info
Number: 43	30	3	1	9
Percentage	70 %	7 %	2 %	21 %



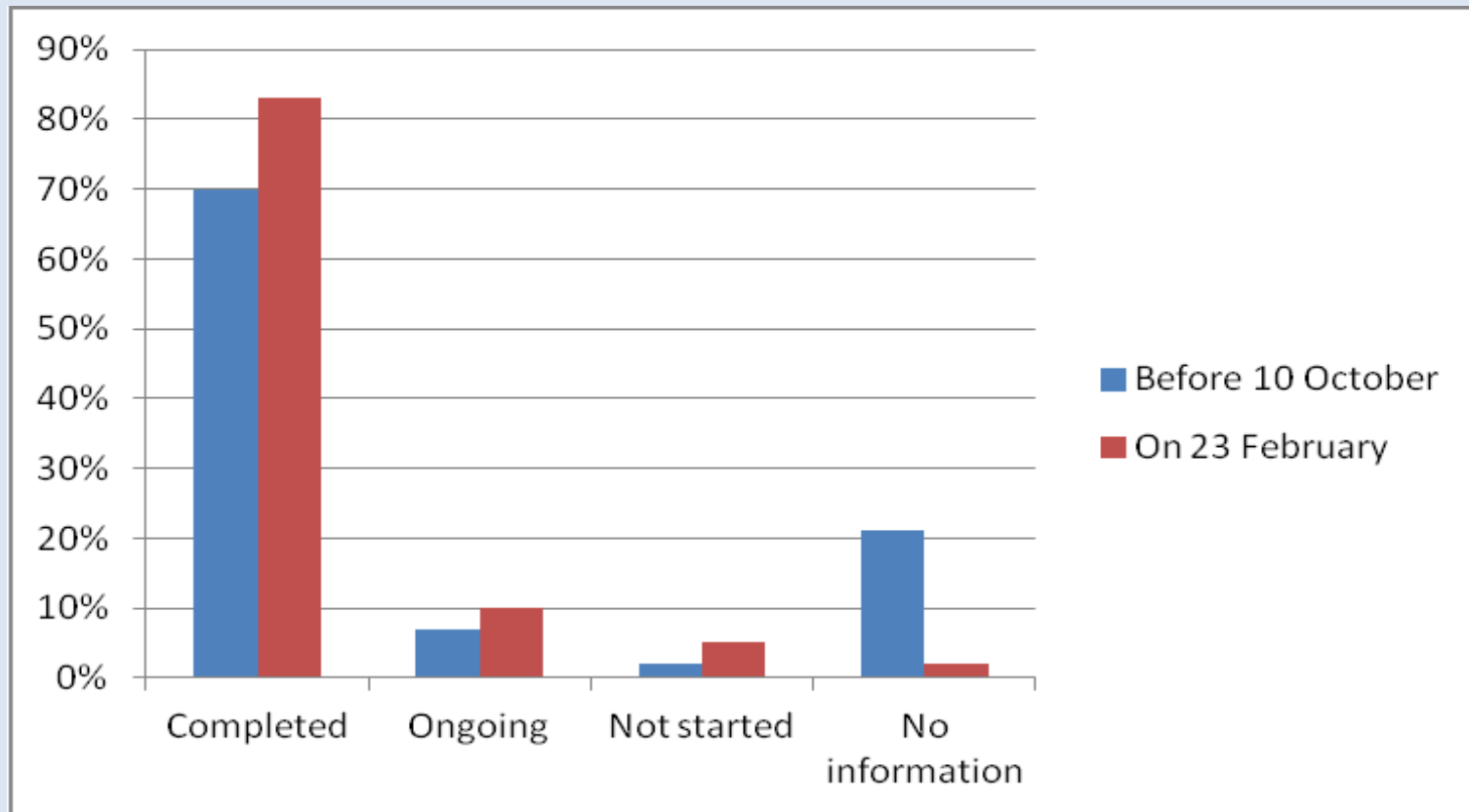
23 February 2015

	Completed	Ongoing	Not started	No information
Number: 41	34	4	2	1
Percentage	83 %	10 %	5 %	2 %



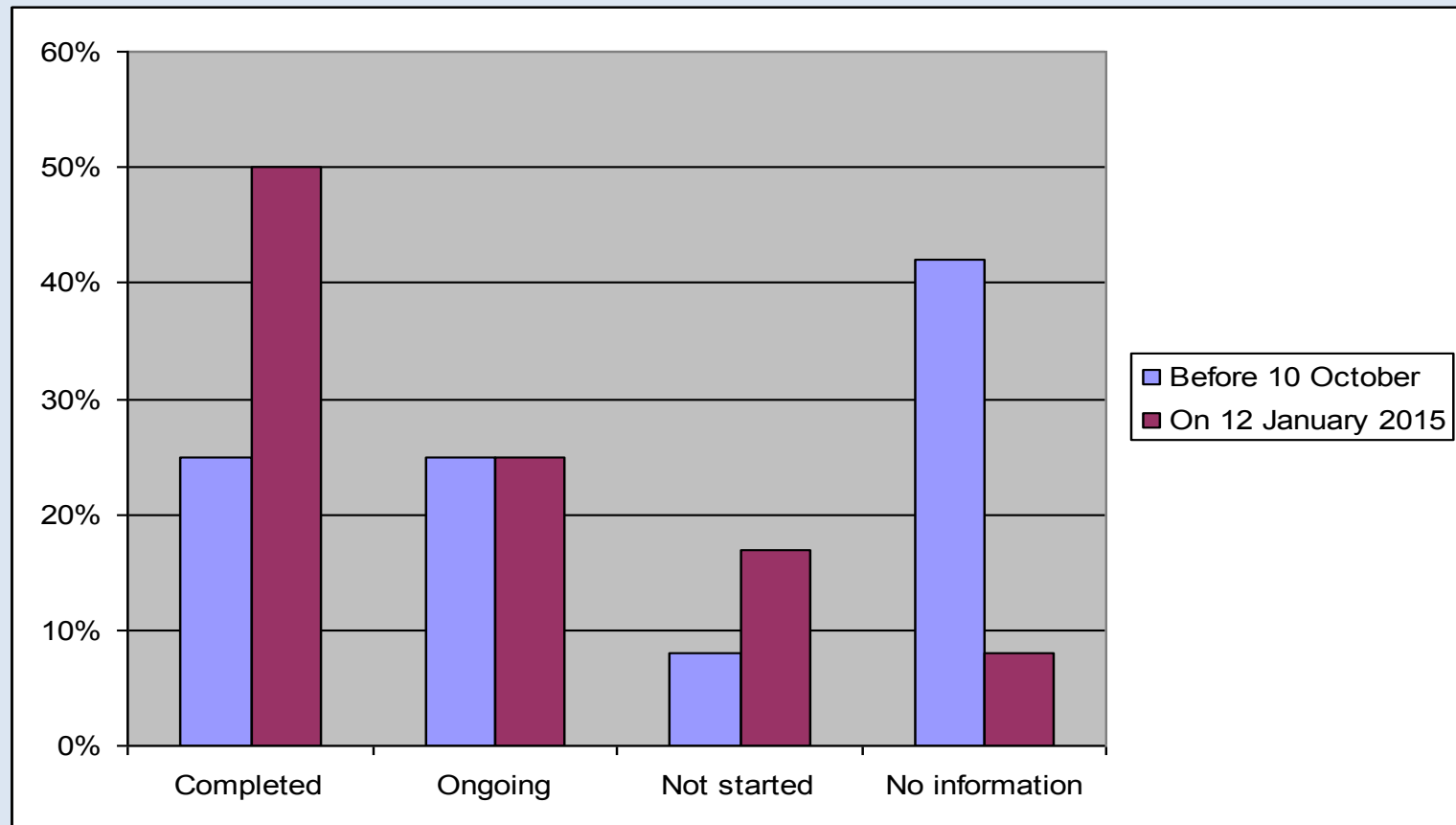
# Status - Comparison

	Completed	Ongoing	Not started	No info
Before 10 October	70 %	7 %	2 %	21 %
On 23 February	83 %	10 %	5 %	2 %



# Status – Comparison in SEE

	Completed	Ongoing	Not started	No information
Before 10 October 2014	25 %	25 %	8 %	42 %
On 12 January 2015	50 %	25 %	17 %	8 %





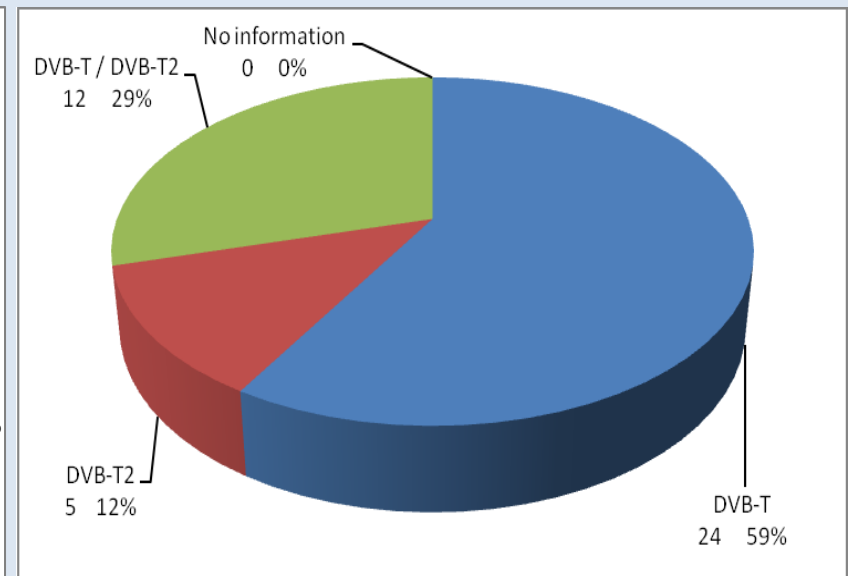
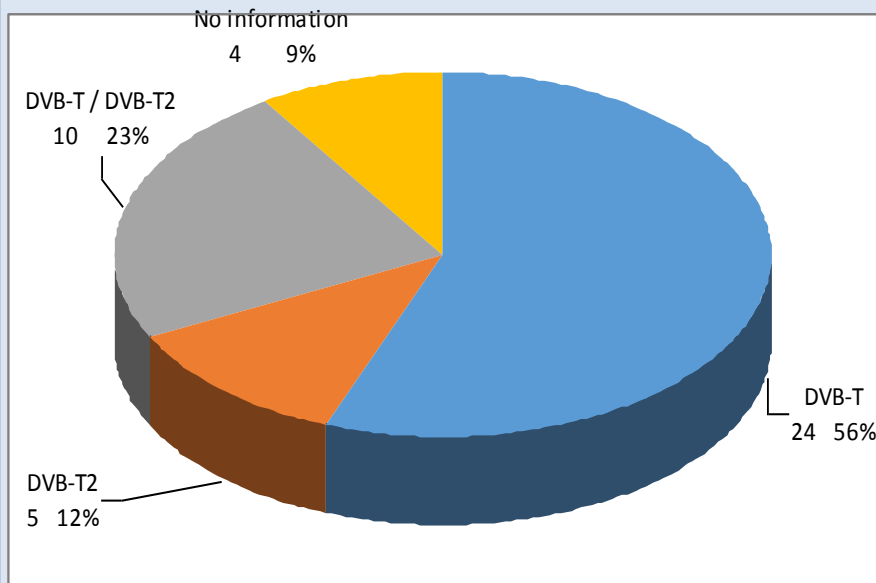
# TV Standard

Before 10 October 2014

	DVB-T	DVB-T2	DVB-T / DVB-T2	No info
Number: 43	24	5	10	4
Percentage	56 %	12 %	23 %	9 %

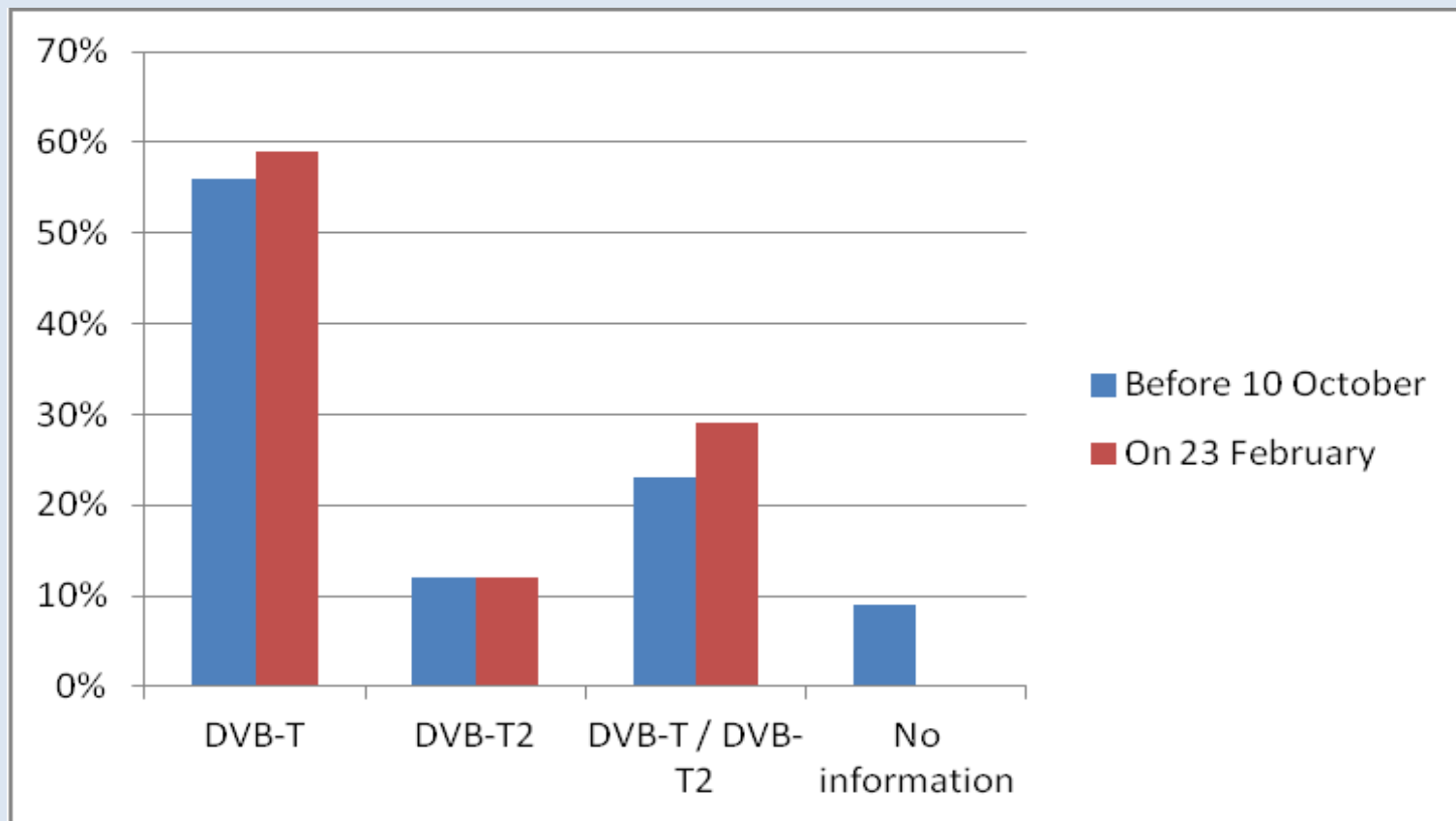
23 February 2015

	DVB-T	DVB-T2	DVB-T / DVB-T2	No information
Number: 41	24	5	12	0
Percentage	59 %	12 %	29 %	0%



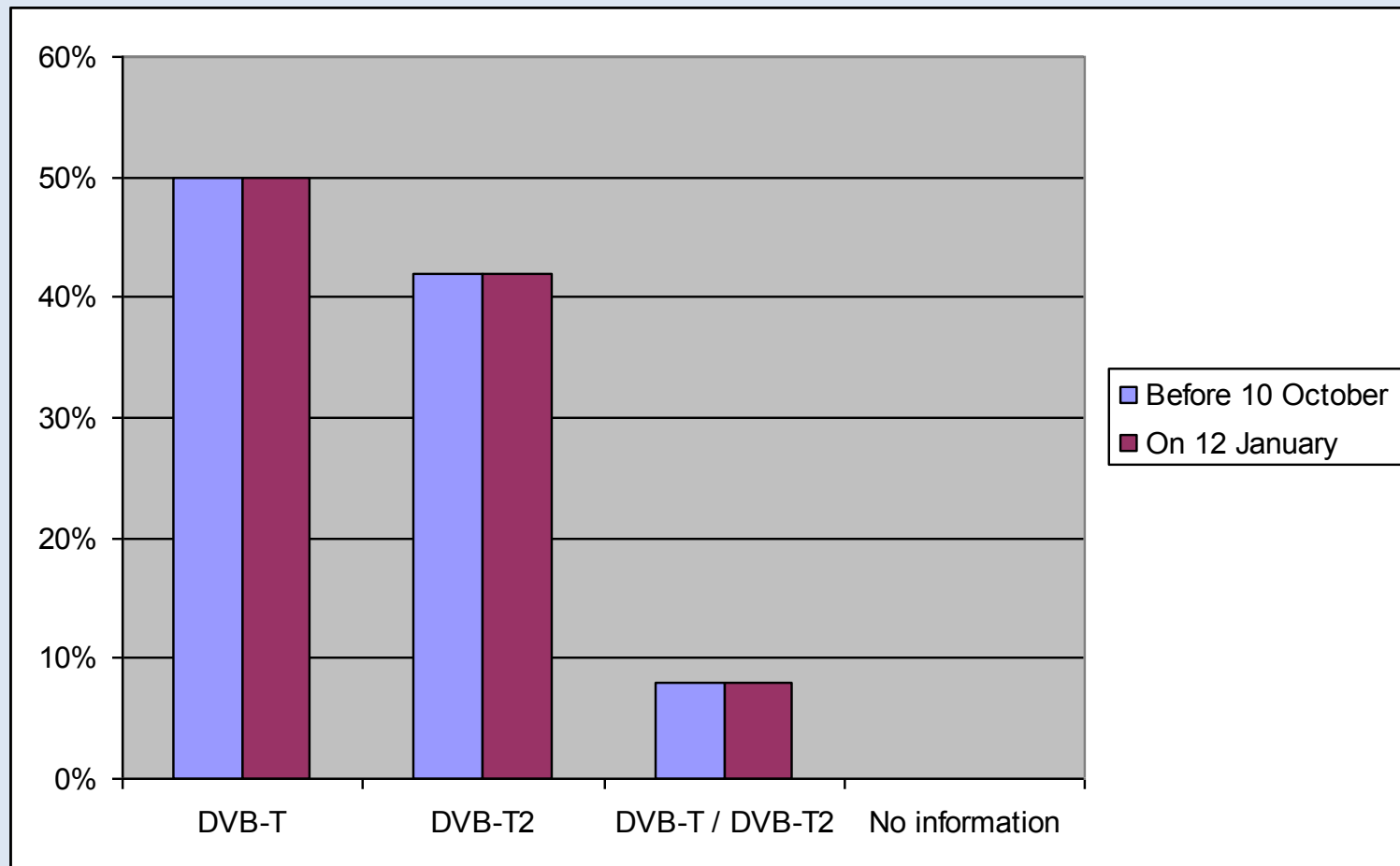
# TV Standard - Comparison

	DVB-T	DVB-T2	DVB-T / DVB-T2	No information
Before 10 October	56 %	12 %	23 %	9 %
On 23 February	59 %	12 %	29 %	0%



# TV Standard – Comparison in SEE

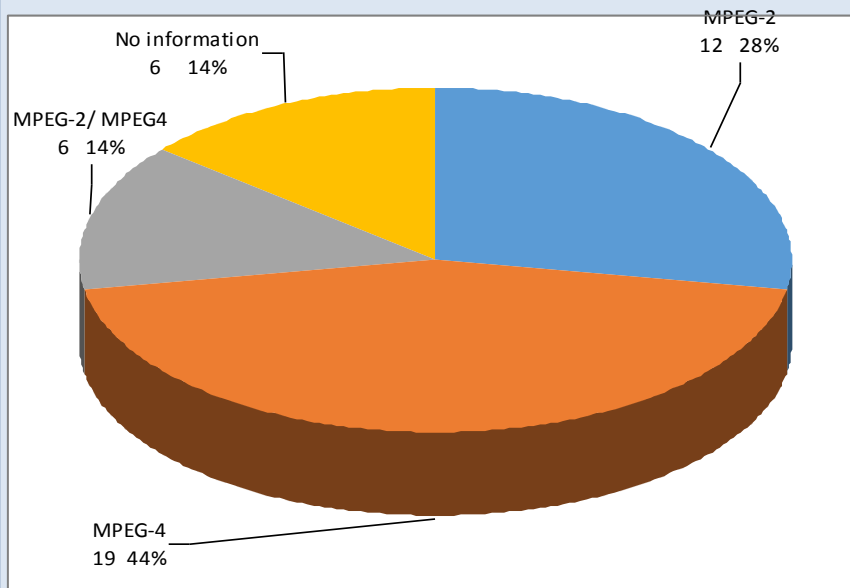
	DVB-T	DVB-T2	DVB-T / DVB-T2	No information
Before 10 October 2014	50 %	42 %	8 %	0 %
On 12 January 2015	50 %	42 %	8 %	0 %



# Compression format

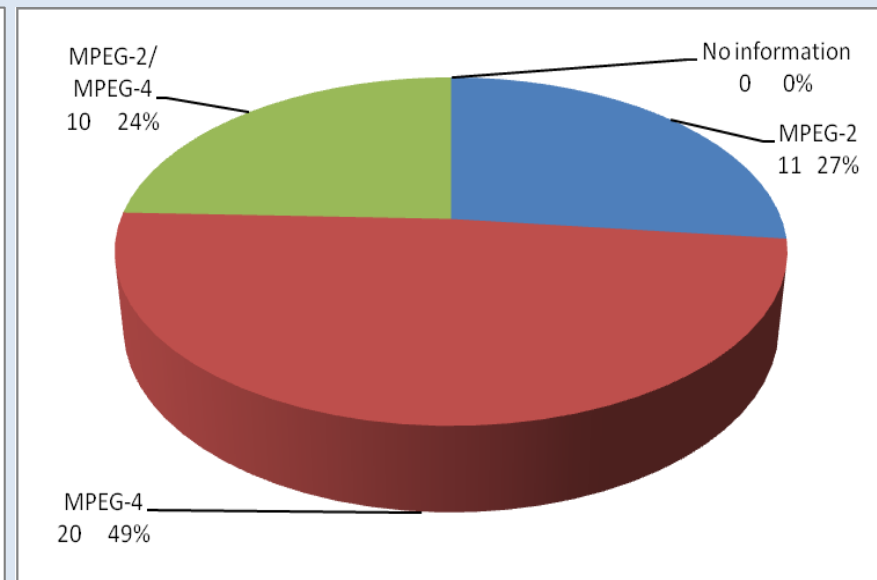
Before 10 October 2014

	MPEG-2	MPEG-4	MPEG-2/ MPEG-4	No info
Number: 43	12	19	6	6
Percentage	28	44	14	14



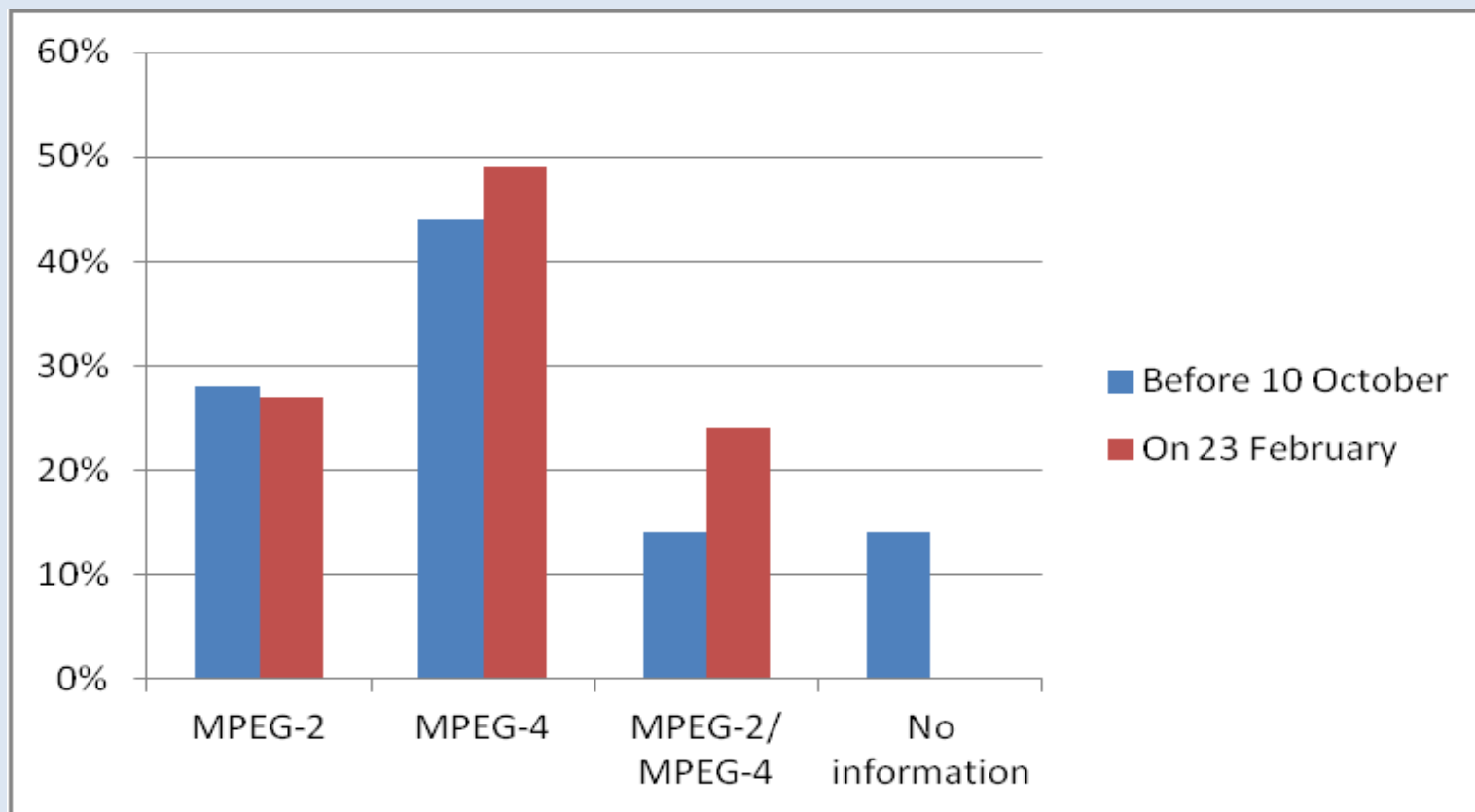
23 February 2015

	MPEG-2	MPEG-4	MPEG-2/ MPEG-4	No info
Number: 41	11	20	10	0
Percentage	27%	49%	24 %	0 %



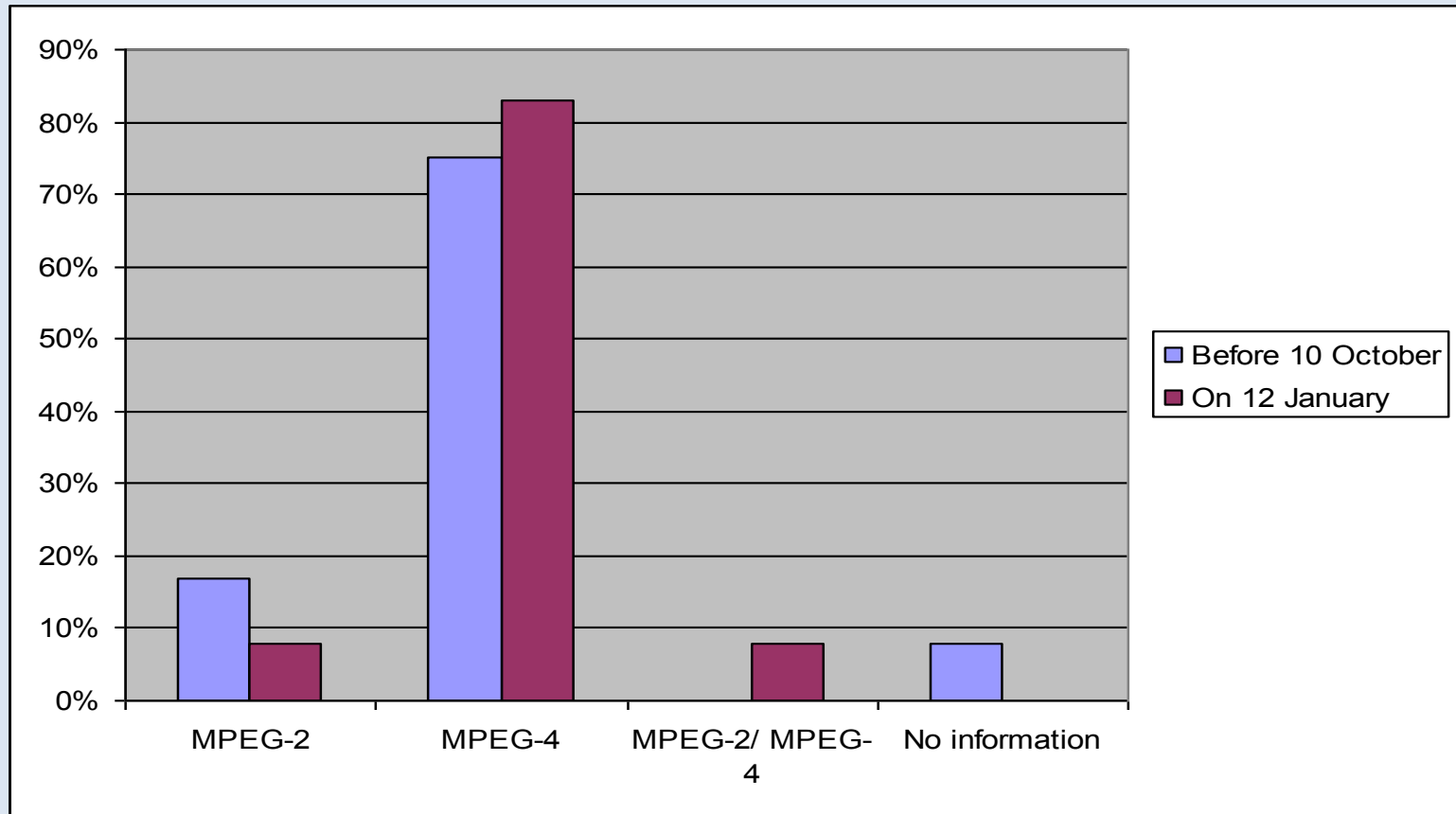
# Compression - Comparison

	MPEG-2	MPEG-4	MPEG-2/ MPEG-4	No information
Before 10 October	28%	44%	14%	14%
On 23 February	27%	49%	24 %	0 %



# Compression – Comparison in SEE

	MPEG-2	MPEG-4	MPEG-2/ MPEG-4	No information
Before 10 October	17%	75%	0%	8%
On 12 January	8.5%	83%	8.5%	0%



# Observations

- 83 % countries completed transition, having DSO date between 2006 and 2015. Analyzing the situation further, it can be seen that largest number of countries, in which transition is not completed yet, are located in the South-Eastern Europe (SEE). From 12 countries, which belonging to SEE, only 6 (50 %) completed transition.
- DVB-T is chosen in more than 50 % of countries (24). All five countries (12%) which decided to start with DVB-T2, belong to SEE. It looks logical because those countries started later. Combination DVB-T and DVB-T2 is chosen in 12 countries (29%).
- Although MPEG-4 was developed later, as an encoding method, this method is chosen in many (20) EUR countries (49 %). MPEG-2 is chosen in 11 countries (27 %). The combination MPEG-2/MPEG-4 is chosen in 10 countries (24 %). It could be expected that many countries will move, in the future, from MPEG-2 to MPEG-4, taking into account better usage of the spectrum.
- **Given the dynamically changing status of DTT deployment, administrations are invited to check the data and make necessary update.**

- ITU-D SG2 Q7/1 Document [SG2RGQ/51-E](#)
- Electromagnetic Fields (EMF) regulations for broadcasting installations in Europe
- Overview of broadcasting related EMF regulation in Europe
- Based on Q38. of the Questionnaire on digital broadcasting transition, European Regional Initiative meeting, November 2012
  - Any regulation for EMF (electromagnetic radiation)? If yes and exists, relevant URL



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**THANK YOU !!**

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