Tendances Carbone

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SUMO policies: smart monetary policies aimed at giving a boost to green investments

The financing of the transition towards a low-carbon economy is one of the key themes of the summit organised by Ban-Ki-Moon, which will take place in New York on 23 September. According to the IEA estimates, investments of around US$ 1,100 billion per year in energy-efficiency and low-carbon technologies will be required between now and 2035, in order to limit global warming to 2°C by 2035. The climate finance flows are currently stagnating at around US$359 billion per year, i.e. well below the estimated investment requirements[1].

In the case of France, we estimate that this financing amounted to over €20 billion in 2011[2]. This amount needs to be doubled in order to achieve the targets for the transition to a low-carbon economy.

In any event, meeting these targets will involve massive private sector financing. One approach that is increasingly being discussed is the use of green monetary policies – or SUMO (Smart Unconventional MOnetary policies) –, which respond to this problem by increasing the green financing on offer, thanks to the intelligent use of money creation on one hand, and to the creation of incentives to attract private financing on the other. This acronym covers several kinds of non-conventional monetary policies: (i) the use of special drawing rights (SDRs) issued by the International Monetary Fund (IMF), (ii) green quantitative easing, and (iii) the issue of carbon certificates[3].

These mechanisms have a high potential to offer attractive financing conditions for green projects, while reducing the specific risks to which they are exposed. In addition, they may be accompanied by joint macro-economic benefits in some circumstances, such as an increase in developing countries' foreign exchange reserves. Even a short-term SUMO policy, if it is used at the same time as policies for stimulating funding demand, could contribute to reinvigorate investment, credit and growth in Europe, and mark the beginning of the roll-out of a structured framework of longer-term environmental policies.

However, the implementation of such mechanisms requires a certain number of issues to be resolved beforehand. The first issue consists in convincing decision-makers that these mechanisms, even though they use non-conventional monetary policies, will not lead to excessive inflation. The second is the fact that entering into multi-lateral agreements is proving difficult in the short-run, due to geopolitical and institutional barriers. The third is the need to involve the private sector. Lastly, the successful transition to a low-carbon economy also involves the need to reduce investments in projects that emit large amount of GHGs and support a carbon-intensive economic model.

Furthermore, to encourage the contribution to low-carbon investment made by SUMO mechanisms, it will be essential to guarantee the environmental integrity of the eligible projects, both on an *ex ante* – i.e. during the selection process – and *ex post* basis. This requires the implementation of monitoring, review and reporting (MRV) mechanisms, which could be based for instance on the experience of the Clean Development Mechanism (CDM), or Energy Savings Certificates (ESCs).

The credibility of the mechanisms demands additional research regarding their potential volume from an environmental (GHG reduction) and financial standpoint, their ecological and economic consequences, and their suitability for emerging and developing economies.

However, these policies appear to be particularly appropriate for the current European environment. In fact, the European Central Bank (ECB) is struggling to achieve its 2% inflation target. Regardless of whether it occurs via Targeted Long-Term Refinancing Operations, or via other non-conventional monetary policies, the introduction of green eligibility criteria will be beneficial to both the financing of the transition to a low-carbon economy and to the reinvigoration of productive investment in Europe.

In the past, the European Union has been a pioneer in the combat against global warming, as demonstrated by the introduction of the EU ETS and of the Climate & Energy Package. It could seize this opportunity to renew and reconfirm its commitment to the combat against climate change.

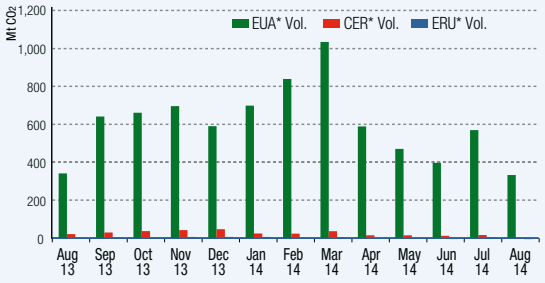
Camille Ferron and Romain Morel - **CDC Climat Research**

1. CPI (2013). *The Global Landscape of Climate Finance 2013*.
2. Morel *et al.* (2014). *Panorama des financements climatiques en France en 2011* (The French Landscape of Climate Finance in 2011). http://www.cdcclimat.com/Panorama-des-financements.html
3. See Ferron and Morel (2014). *Smart Unconventional Monetary (SUMO) policies: giving impetus to green investment*. http://www.cdcclimat.com/Climate-Report-no46-Smart.html

Key points

- **New EU Commissioner :** Miguel Arias Cañete (Spain) has been appointed as the new energy and climate commissioner.
- **EU ETS Reform:** Denmark, Latvia, Slovenia, and Sweden support Germany's proposal for the mechanism becoming operational ahead of schedule as from 2017.
- **Climate and Energy package 2030:** the European Commission has published a new proposal at the end of July with the goal of improving energy efficiency by 30% in 2030.

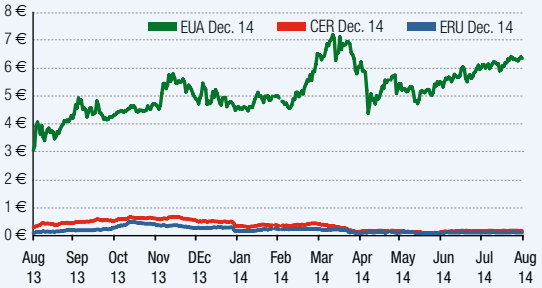
Trading volumes: EUA –41.5%, CER –82.9%, ERU –96.7%



* Spot & futures, exchanges & OTC cleared

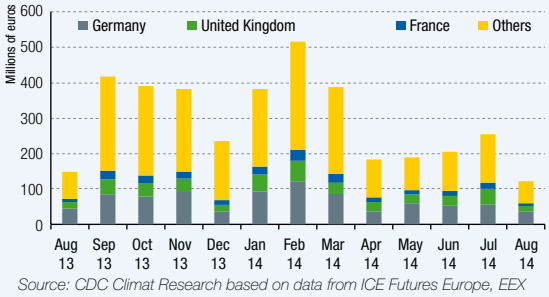
Source: CDC Climat Research calculation, based on data from EEX, ICE Futures Europe, NYMEX, Nasdaq OMX, and LCH Clearnet

Price of Dec. 14 contract: EUA 5.03%



Source: CDC Climat Research, ICE Futures Europe

Income from Phase 3 auctions: 122 M€ in August (–52.19%)



Source: CDC Climat Research based on data from ICE Futures Europe, EEX

Energy

Primary energy prices and electricity prices

			Aug. 2014	
Coal	API # 2 CIF ARA (First month in USD/t)		77.1	▲
Natural gas	NBP (spot in €/MWh)		15.2	▲
	TTF (spot in €/MWh)		17.5	▲
Crude oil	Brent (First month in USD/b)		103.4	▼
Electricity	Germany (€/MWh)	Spot	31.5	▼
		Calendar	35.6	▲
	United Kingdom (€/MWh)	Spot	47.4	▲
		Next summer	61.9	▲
		Next winter	69.1	▲

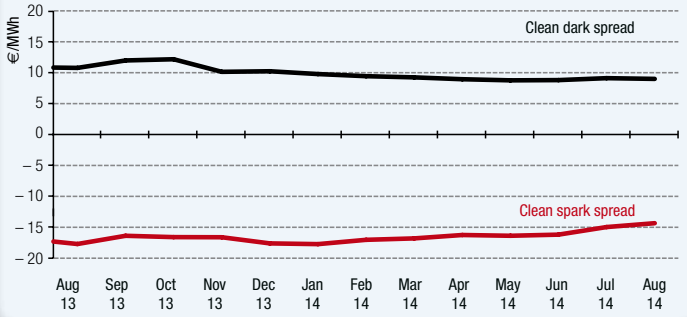
Sources: CDC Climat Research, Thomson Reuters

Clean dark, clean spark spreads and switching price

	Clean spark (€/MWh)		Clean dark (€/MWh)		Switching Price (€/tCO2)	
	spot	futures	spot	futures	spot	futures
Germany*	–5.8	–14.3	5.7	9.1	17.6	27.9
United Kingdom*	19.2	8.3	21.0	34.7	12.8	29.7

** Germany, 2015 calendar contract, United Kingdom, summer 2015 contract.*

German baseload – monthly average of Cal. 2015 clean dark and clean spark spreads



Sources: CDC Climat Research, Thomson Reuters

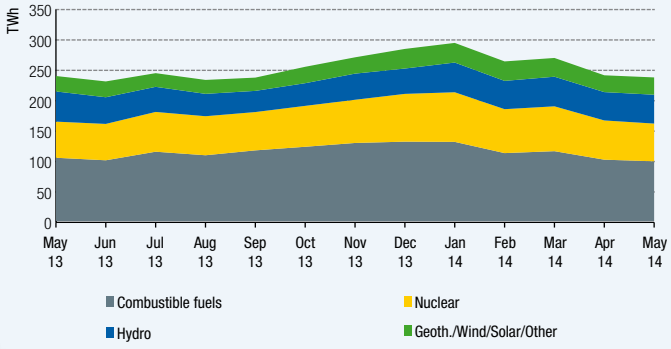
In August 2014, the average monthly price of Brent crude oil has declined by 4.4% to reach $103.4/b. The reason in the fall of oil prices is due to a well-supplied market. Libya has started re-exporting oil and fears over Iraq's political future with an imminent Kurdish attack have subsided. The gas prices have risen over the month of August: NBP spot prices have risen marginally by 1.5% to reach 15.2 €/MWh, while TTF spot prices have risen by 6.1% to reach 17.5 €/MWh. The supply has remained tense due to maintenance carried out on the Norwegian supply routes and the prospects of rising temperature. With regards to electricity, the German power spot prices reduced by 4.4% while the calendar 2015 prices saw an increase of 2%. However, there has not been huge variation in prices in the German electricity market in August due to sufficient power generation from renewable sources by the German producers. Finally, the German clean dark prices have fallen on both the spot and futures market, while the clean spark price has risen on the spot market and fallen on the futures market. The theoretical switching price was calculated at 17.6 €/tCO_2 (+6.7%) for the German spot market and 12.8 €/tCO_2 (–1.4%) for the UK market.

Production

Electricity generation (TWh)

EU 20 (in TWh)	May 14	Cumulative from Jan. 14	Year-on-Year (% change)
Production	237.6	1,308.8	– 4.5%
of which - Combustible fuels	98.8	559.2	– 12.9%
- Nuclear	62.5	356.6	– 0.6%
- Hydro	47.8	239.7	– 0.1%
- Geoth./Wind/Solar/Other	28.6	152.2	18.8%

** Gas, coal, oil.*

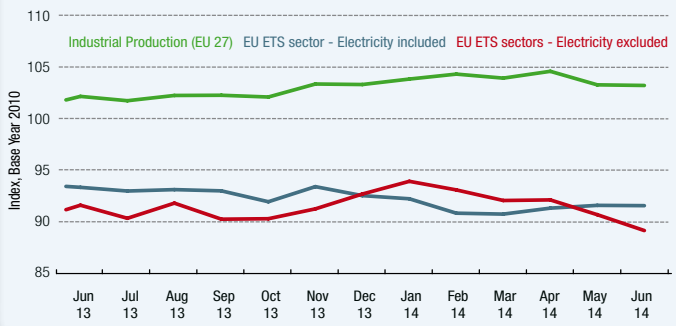


Source: CDC Climat Research, from IEA data

Production indices (Index base year 2010)

EU 27	June 14	Last month (pts)	Year-on-Year (pts)
Indust. Prod (excl. construction)	103.2	–0.1	0.4
EU ETS sectors production* (incl. electricity)	91.6	0.0	–0.9
EU ETS sectors production* (excl. electricity)	89.6	–1.1	–1.8
Electricity. gas and heating	92.8	0.8	–0.2
Cement	75.5	–3.8	–3.6
Metallurgy	100.5	1.4	0.8
Oil refinery	87.1	–4.1	–5.8

** Index weighted by EU ETS sectors's weight in average total allocation over 2008-2012*

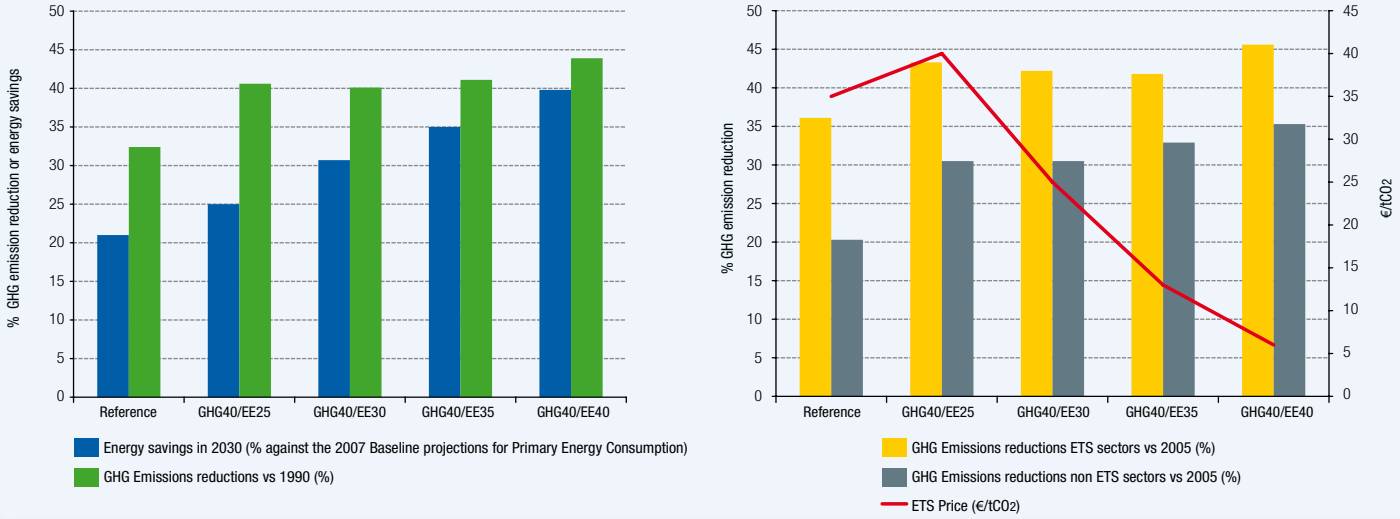


Source: CDC Climat Research from Eurostat data

The industrial production in the EU 27 countries declined in June 2014 by 0.1%. As compared to June 2013, the industrial production remained stable in the euro area and rose by 0.7% in the EU 27 countries. The decrease in industrial production of 0.1% is due to non-durable goods falling by 1.4% and energy by 0.6%, while capital goods increased by 0.2%, intermediate goods by 0.4% and durable goods by 1.8%. According to the monthly publication released by Eurostat, the largest decrease in industrial production was observed in Ireland (–16.5%), the Netherlands (–3.0%) and Lithuania (–2.7%), while the highest increases were observed in Malta (+5.2%), Denmark (+2.4%) and Hungary (+1.8%). Our EU ETS sector production index (including electricity) saw no monthly variation while the index excluding electricity declined by 1.1% to 89.6. The electricity generation in EU 20 countries was 237.6 TWh. Compared to April 2014, the electricity generation declined by 1.54% and compared to May 2013 it declined by 1.42%. The decline in electricity generation is attributed to the fall in combustion fuels (–2.7%) and nuclear energy (–3.75%).

Coordination of CO_2, EE and RES policies

Impact of energy efficiency target on the GHG emissions and the price of CO_2



Note: Reference refers to the scenario with no additional climate and energy policies on the trajectory of the 2020 objectives; EE 25, 30, 35, 40 refer to the scenario with a 40% GHG target, a 27% EU level renewable energy target, and energy savings of respectively 25%, 30%, 35%, 40% in 2030 compared to the 2007 Baseline projections for Primary Energy Consumption.
Source: European Commission, Impact Assessment, Energy efficiency and its contribution to energy security and the 2030 Framework for Climate and energy policy, 2014

On 23 July, the European Commission issued a communication regarding the energy-efficiency target, which raised that target to 30% in 2030, i.e. above the 25% level required to achieve the target of reducing CO_2 emissions by 40% announced in the 2013 Energy & Climate Package in January. Accordingly, the EU's primary energy consumption would supposedly be restricted to 1,307 Mt by that date. This upward revision of the targets comes at a time when 20% energy-efficiency gains by 2020 target will more than likely not be achieved in the context of current policies. The impact study relating to this higher target points to an additional annual cost of €20 billion, in exchange for substantial benefits in terms of economic gains and security of supply. Furthermore, the Commission has called on EU Member States to transpose the Energy-Efficiency Directive into domestic law. Formal notices have been sent to the 24 Member States who had not yet made this transposition official before the 5 June cut-off date.

Institutional environment

Phase 3 supply balance table

	2013	2014*
Auctions ($MtCO_2$)	**804**	**290.6***
Free allocation ($MtCO_2$)	**843**	**767**

**till May 2014*

Free allocation status table

EU Member State	2013	2014
France	82	81
Germany	169	163
United Kingdom	66	64
Others	526	459
TOTAL	**843**	**767**

Sources: CDC Climat Research, European Commission, ICE Futures Europe, EEX

CER and ERU supply

	August 14	Last month change
Number of CDM projects	**12 229**	**+ 1 068,0**
of which - registered	7 538	+ 20,0
with - CER issued	2 618	+ 8,0
Cumulative volume of CER issued (Mt)	**1 472**	**+ 6,0**
Number of JI projects	**788**	**0,0**
of which - registered	604	0,0
Cumulative volume of ERU issued (Mt)	**849,5**	**+ 0,5**
via - Track 1	824,0	+ 0,1
via - Track 2	25,4	+ 0,4

Sources: CDC Climat, UNEP-DTU

The timetable for the auctioning of the 2014 allowances for the aviation sector has been published: 9.278 million allowances will be issued between September and November 2014. In 2015, the auctions will be held before 30 April, the compliance date for the sector, and will enable a total amount of 5.8 million annual allowances to be issued between 2013 and 2015. Meanwhile, the Member States met on 22 July in order to continue their discussions on the Market Stability Reserve (MSR). Several Member States, including Denmark, Latvia, Slovenia, and Sweden support Germany's proposal for the mechanism becoming operational ahead of schedule as from 2017. The issue of the "back-loaded" allowances is also a focus point of the discussions, including their possible inclusion in the reserve, as is the mechanism's responsiveness to structural imbalances in the market, and the threshold level for triggering the mechanism. Furthermore, the Member States' Climate Change Committee met on 9th July, and agreed with the proposed list covering the potential carbon leakage sectors during the period between 2015 and 2019. The European Parliament and Council will review this proposal over the next three months before its official adoption by the Commission.

Carbon markets dashboard

Primary market - EUA auctions in Phase 3

		Aug-13	Sep-13	Oct-13	Nov-13	Dec-13	Jan-14	Feb-14	Mar-14	Apr-14	May-14	Jun-14	Jul-14	Aug-14
Common Auction Platform + United Kingdom & Germany	Price (€/t)	4.40	5.19	4.83	4.51	4.62	5.00	6.45	6.35	7.35	5.03	5.54	5.91	6.23
	Volume (Mt)	33.65	80.33	80.62	84.53	50.90	76.31	80.33	60.98	35.22	37.72	37.02	43.28	19.52
Auction Revenues (M€)	Germany	44.50	84.82	78.19	91.29	36.66	92.28	121.62	85.73	36.53	59.46	52.45	55.37	36.75
	United Kingdom	18.30	42.33	38.40	37.87	18.27	48.43	57.88	31.69	26.48	25.35	27.82	44.97	14.93
	France	8.76	24.28	21.28	19.65	13.43	22.21	31.21	24.78	13.13	11.65	14.01	17.35	7.90
	Others	76.64	265.65	252.38	232.84	166.63	218.98	304.96	245.15	106.82	92.56	110.32	136.70	62.03
	Total	148.20	417.08	390.25	381.64	235.00	381.89	515.66	387.35	182.96	189.02	204.60	254.39	121.61

Sources: EEX, ICE Futures Europe

Primary market - CER and ERU issued ($MtCO_2$)

		Aug-13	Sep-13	Oct-13	Nov-13	Dec-13	Jan-14	Feb-14	Mar-14	Apr-14	May-14	Jun-14	Jul-14	Aug-14
Cumulative volume of CER issued UNEP-DTU (Mt)		1,369	1,388	1,400	1,409	1,419	1,428	1,433	1,440	1,451	1,457	1,466	1,472	1,480
Cumulative volume of ERU issued (Mt)	Track 1 (Mt)	785.1	801.5	802.4	803.5	803.7	803.8	809.6	816.1	824	824.1	824	824.1	824.4
	Track 2 (Mt)	24.7	25.1	26.7	25.4	25.4	25.4	25.4	25.4	25	25.4	25.4	25.4	25.4

Sources: UNEP-DTU, CDC Climat Research

Secondary market - Prices (€/t) and volumes: EUA, CER ($ktCO_2$)

			Aug-13	Sep-13	Oct-13	Nov-13	Dec-13	Jan-14	Feb-14	Mar-14	Apr-14	May-14	Jun-14	Jul-14	Aug-14
ICE Futures Europe	Daily spot	Price EUA phase 3	4.41	5.22	4.91	4.53	4.79	4.98	6.51	6.11	5.22	5.11	5.52	5.96	6.26
		Volume EUA phase 3	5,564	14,672	10,483	7,136	14,965	14,405	21,075	35,324	49,429	19,271	20,937	11,897	5,173
		Price CER	0.62	0.65	0.56	0.42	0.36	0.39	0.36	0.19	0.17	0.12	0.14	0.16	0.17
		Volume CER	57	170	0	47	1,204	80	375	1,028	2,998	745	167	1,530	1
	Dec.14	Price EUA	4.58	5.38	5.07	4.69	4.92	5.07	6.61	6.19	5.28	5.50	5.62	6.00	6.29
		Volume EUA	74,289	93,620	135,862	163,545	240,590	450,338	527,394	640,679	360,681	469,397	254,497	336,379	210,539
		Price CER	0.62	0.62	0.52	0.41	0.35	0.37	0.36	0.18	0.16	0.23	0.12	0.16	0.17
		Volume CER	6,505	12,753	7,949	16,224	20,287	15,305	13,092	20,681	8,006	15,527	6,058	10,426	1,353
	Dec.15	Price EUA	4.75	5.59	5.28	4.89	5.10	5.26	6.91	6.41	5.46	5.50	5.80	6.16	6.44
		Volume EUA	20,176	46,207	57,629	55,672	57,784	102,312	116,329	120,993	60,524	467,135	56,911	114,684	64,504
		Price CER	0.70	0.71	0.60	0.48	0.45	0.48	0.52	0.48	0.41	0.23	0.29	0.40	0.40
		Volume CER	620	3,184	5,586	4,158	10,987	8,766	7,711	11,991	2,012	15,510	3,454	3,951	1,636
	Dec.16	Price EUA	4.96	5.85	5.54	5.12	5.32	5.49	7.26	6.76	5.7	5.50	6.02	6.35	6.62
		Volume EUA	7,216	26,918	21,449	16,416	17,398	36,721	62,380	101,196	45,597	466,631	33,286	61,189	28,171
		Price CER	0.72	0.74	0.62	0.50	0.46	0.50	0.55	0.49	0.42	0.33	0.29	0.40	0.41
		Volume CER	0	0	0	10	0	689	245	982	164	800	0	0	10

Sources: ICE Futures Europe

Emission-to-cap by EU ETS sector and country: difference between distributed allocations of allowances and verified emissions

	2008	2009	2010	2011	2012
Combustion	–253.1	–113.5	–125.8	–76.9	–40.6
Oil refining	–1.4	7.6	14.3	16.0	24.2
Coking plants	1.5	6.8	2.9	3.1	5.7
Metal ores	4.3	11.0	8.8	8.9	9.8
Steel production	51.6	89.3	71.4	72.8	74.0
Cement	20.9	61.4	61.0	62.8	74.1
Glass	2.5	6.1	5.5	5.4	6.4
Ceramic products	5.3	10.0	10.2	9.6	10.4
Paper	6.9	11.3	10.0	11.1	12.9
Other activities	0.2	4.3	1.3	–0.7	6.2
Total (Mt)	**–161.3**	**94.2**	**59.8**	**112.1**	**183.2**

Source: CITL

	2008	2009	2010	2011	2012
Germany	–84.0	–36.6	–54.4	–49.5	–27.8
United Kingdom	–50.8	–15.0	–16.8	2.5	–2.2
Italy	–8.5	24.1	8.5	5.3	12.8
Poland	–3.1	10.8	5.9	4.2	16.1
Spain	–9.6	13.7	29.5	18.4	17.4
France	5.5	17.5	23.4	33.9	35.8
Czech Republic	5.2	12.2	10.6	12.2	17.1
The Netherlands	–6.8	2.8	0.1	8.9	10.6
Romania	7.7	24.9	27.7	23.6	26.9
Others	–17.0	39.8	25.3	52.7	76.6
Total (Mt)	**–161.3**	**94.2**	**59.8**	**112.1**	**183.2**

Source : CITL

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