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EUROPEAN ANTI-FRAUD OFFICE (OLAF)
Protection of the EURO

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THE PROTECTION OF EURO COINS IN 2010

TABLE OF CONTENTS

1.	Introduction	3
2.	Situation with regard to counterfeit euro coins	3
2.1	Counterfeit coins seized in circulation	3
2.2	Counterfeit coins seized before circulation	5
2.3	Common classes (stamped counterfeit coins)	6
2.4	Local classes (cast counterfeit coins)	9
3.	Regular activities of the ETSC	9
3.1	Counterfeit Coin Experts Group (CCEG)	9
3.2	Other groups	10
4.	Specific initiatives concerning the protection of euro coins	11
4.1	Pericles actions for the protection of euro coins	11
4.2	Coin-related legislative developments	12
4.3	Cooperation with third countries	12
4.4	Other potential threats to euro coins	12
5.	Conclusions	14

1. INTRODUCTION

This report presents the activities of the European Technical & Scientific Centre (ETSC) and of the situation as regards coin counterfeiting.

The report is structured according to the above-mentioned double requirement. Section 2 gives first a detailed overview of the evolution of euro coin counterfeiting in 2010. Sections 3 and 4 then present the regular and specific activities that the ETSC has carried out in 2010 in order to reinforce the protection of euro coins.

2. SITUATION WITH REGARD TO COUNTERFEIT EURO COINS

A distinction that has to be made on counterfeit euro coins between those detected in circulation and those seized before circulation. The counterfeit coins detected before circulation are usually seized by police before causing financial damage, whereas the counterfeit coins detected in circulation are generally detected in coin sorting centres, operated by National Central Banks or private sector CIT (cash-in-transit) companies.

2.1 Counterfeit coins seized in circulation

The total number of counterfeit euro coins removed from circulation in 2010 reached 186 000, an increase of about 8% from 2009.

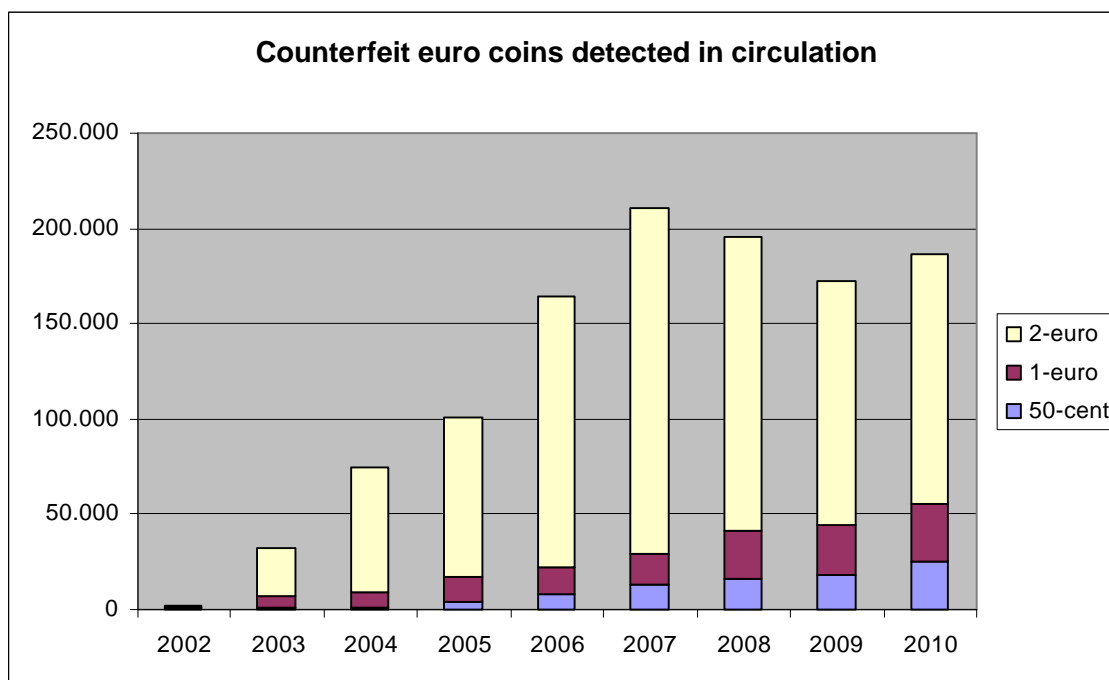
The breakdown by denomination of counterfeits found in circulation for the last four years is shown below:

Counterfeit euro coins detected in circulation, 2007 – 2010*				
	50-cent	1-euro	2-euro	Total
2010	25 100	31 000	129 700	185 800
2009	18 100	26 500	127 500	172 100
2008	16 600	24 500	154 800	195 900
2007	13 000	16 200	181 900	211 100

* The figures comprise both stamped counterfeits (common classes) and cast counterfeits (local classes).

When compared to 2009, among the 3 highest coin denominations, the number of 2-euro counterfeits increased by over 2%. In spite of rapid increase in numbers of counterfeit coins of 50-cent and 1-euro (38% and 16% respectively), 2-euro remains by far the most counterfeited euro coin, constituting 85% in value terms. Overall, nearly 1.150.000 counterfeit euro coins have been removed from circulation since the introduction of the euro coins in 2002.

The evolution since the introduction of euro coins in 2002 is given in the following chart:



Progress shown in removing counterfeit euro coins from circulation reflects the efforts made by Member States to authenticate euro coins. To assist in these efforts, the European Parliament and the Council adopted the Regulation No 1210/2010 of 15 December 2010¹ proposed by the Commission on the authentication of euro coins. This Regulation was published on 15 December 2010 and sets out the rules for financial institutions to ensure that all euro coins which they put back into circulation are genuine.

In 2010, countries with the highest level of detected counterfeits (Germany and France), registered a slight fall in quantities. At the same time, countries where the stricter controls had been imposed (Portugal, Spain, Italy) showed a sharp rise in quantities.

Counterfeit euro coins were found in all Member States of the euro area in 2010, with the exception of Cyprus. Germany remains the country where most counterfeit coins are found. Its share had come down the last years to 36% due to progress made in other countries. Small numbers of counterfeit euro coins were also detected in Member States which do not belong to the euro area and third countries.

Overall, the number of counterfeit coins detected in circulation in 2010 remains very small by comparison to the total of 92 billion genuine euro coins in circulation including 16 billion of the three highest denominations.

¹ Regulation (EU) No 1210/2010 of the European Commission, Parliament and of the Council of 15 December 2010 concerning authentication of euro coins and handling of euro coins unfit for circulation

2.2 Counterfeit coins seized before circulation

In addition to the counterfeit euro coins removed from circulation, counterfeits are regularly seized before they enter into circulation, mainly in the framework of police operations and investigations. These activities include dismantling of clandestine mints, but also seizures of significant quantities from individuals, that might, in one way or another, be involved in the distribution of counterfeit coins. These seizures occur irregularly therefore the number of counterfeits seized before circulation varies significantly from year to year.

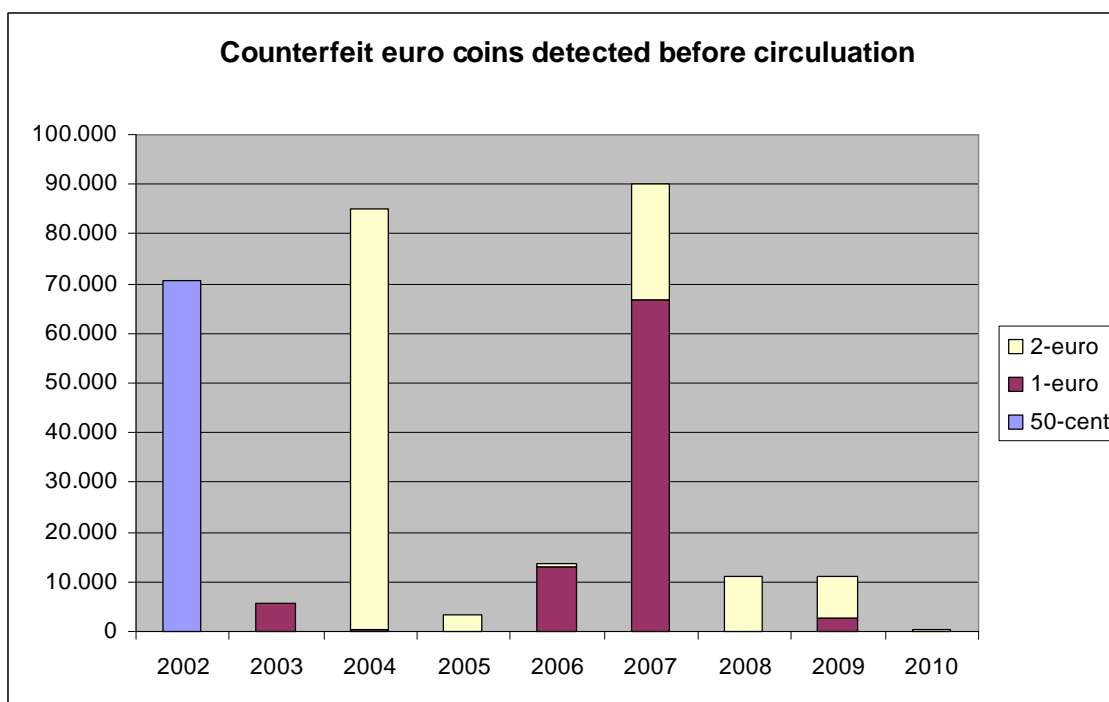
The number of counterfeit coins seized before circulation in 2010 was under 600. The breakdown per denomination of counterfeit euro coins found before circulation for the last four years is shown below:

Counterfeit euro coins detected before circulation, 2007 – 2010*				
	50-cent	1-euro	2-euro	Total
2010	0	14	555	571
2009	5	2 579	8 477	11 061
2008	1	2	11 200	11 203
2007	8	66 700	23 200	89 908

* The figures comprise both stamped counterfeits (common classes) and cast counterfeits (local classes).

For the second consecutive year no illegal mint has been dismantled by law enforcement, neither large seizures were made. Overall, about 290.000 counterfeit euro coins have been seized before circulation since 2002.

The development of the number of counterfeit coins detected before circulation since the introduction of euro coins in 2002 is presented in the following chart:



2.3 Common classes (stamped counterfeit coins)

Counterfeit coins detected in the Member States are analysed by the Coin National Analysis Centres (CNACs). They are classified by reference to already identified counterfeit types. Counterfeits that cannot be classified to one of the already identified types are sent to the ETSC in order to create a new class or variant.

A distinction is made between common classes and local classes. Local classes correspond to cast counterfeit coins, usually produced in smaller quantities. These are dealt within the next section.

Common classes are counterfeits made with a stamping process, similar to the one used in official minting. With such processes, larger amounts of counterfeits can be produced and this is the reason for which a monitoring on the EU level has been applied. Stamped classes usually bear defects which are characteristic of the tools used to produce them. Stamped counterfeit coins are classified into classes and variants according to these defects, because similar defects may indicate that the counterfeits have been produced by the same tools, indicating possibly the same illegal mint. New variants of classes indicate a development in production tools. Variants therefore provide useful indications of the development in counterfeiting activity.

2.3.1 Overall analysis

Creation of common classes

The total number of families of counterfeits (common classes) created by the ETSC continued to rise in 2010, indicating a potential increase in the number of illegal mints producing counterfeit euro coins. In particular, 11 common classes were created in 2010, the lowest number since 2002, which reflects the fact that most of the classes that had been created are still in circulation and the efficient deterring does not “encourage” the creation of the new mints or tools. The number of common classes created by the ETSC each year since the introduction of euro coins is indicated in the table below:

Number of newly identified common classes				
	50-cent	1-euro	2-euro	TOTAL
2002	1	5	5	11
2003	6	4	5	15
2004	11	3	8	22
2005	9	3	6	18
2006	6	5	3	14
2007	7	6	2	15
2008	6	2	4	12
2009	3	5	8	16
2010	6	3	2	11
TOTAL	55	36	43	134

The total number of classes has now risen to 134. Despite the large number of common classes, the bulk of counterfeit coins is still concentrated. In particular, one common class (2-euro class 6) represented in 2010 more than 31% of the total number of registered 2-euro counterfeits (a drop from 41% in 2009). For the 50-cent denomination, almost half of the counterfeits found in circulation belongs to a single class (common class 1). In total, six classes are responsible for around half of the total number of counterfeits found in circulation. Except for the 50-cent common class 1, no illegal mint has been dismantled for any of those classes.

Of the total number of classes, 17 were proven to be connected to the clandestine mints that have been dismantled until now. For the remaining classes, evidence was found for seven classes, following their creation, demonstrating that they are linked

to another class. This leads to the conclusion that there are illegal mints that are producing or have produced up to 111 classes of counterfeit euro coins and that remain undiscovered to date.

Creation of variants

Within the common classes, the diversity of counterfeit euro coins has dropped significantly. In 2010, 23 new variants were created, which is much less than in 2009. This brings their total number to 549.

The number of variants (including new classes) created by the ETSC for each year since the introduction of euro coins is indicated in the table below.

Number of newly identified common classes + variants				
	50-cent	1-euro	2-euro	TOTAL
2002	1	14	19	34
2003	6	7	50	63
2004	12	12	72	96
2005	12	7	81	100
2006	10	9	51	70
2007	10	18	44	72
2008	8	6	26	40
2009	4	14	30	48
2010	6	7	10	23
TOTAL	69	94	377	549

2.4 Local classes (cast counterfeit coins)

The number of cast counterfeit coins detected as well as the percentage of the total number of counterfeits in circulation are shown in the table below.

Cast counterfeit coins									
Year	2002	2003	2004	2005	2006	2007	2008	2009	2010
Number	756	1172	405	384	64	275	310	717	925
Percentage	34,9%	3,6%	0,5%	0,4%	0,0%	0,1%	0,2%	0,4%	0,5%

Cast counterfeit coins mainly concern the 2-euro denomination. They are generally of a relatively low quality and quantity and should therefore be considered as less dangerous.

3. REGULAR ACTIVITIES OF THE ETSC

The primary mission of the ETSC is the technical/scientific analysis and classification of common classes of counterfeit coins. This type of activity is already covered in chapter 2.

The coordination of the activities of the competent authorities, in euro coin protection against counterfeiting, was attributed to the Commission. This co-ordination takes place mainly within the **Counterfeit Coin Experts Group** and also through other coin related groups.

3.1 Counterfeit Coin Experts Group (CCEG)

The Counterfeit Coin Experts Group (CCEG), chaired by the Commission/OLAF, is the basic group serving to co-ordinate Member States' technical actions with respect to the protection of the euro coins against counterfeiting, in line with Council Decision of 8 December 2003 and the Commission Decision of 29 October 2004. The CCEG meetings bring together the Heads of the Coin National Analysis Centres (CNACs), the ETSC, the ECB and Europol.

The CCEG held two meetings in 2010. These enabled the exchange of information between the CNACs, the ETSC, ECB and Europol. Some specific issues, were elaborated among a group of coin experts in technical meetings of the ETSC Work team (see Section 4.1).

The 'ETSC Work Team', chaired by OLAF, held two technical meetings in 2010, gathering technical coin experts from several CNACs on following issues.

- definition of the guidelines for implementation of the coin authentication (as stipulated in the Council regulation 1210/2010)
- preparation of common support material for training programmes on manual coin authentication by cash handlers.

- assessment of C5A classification tool
- assessment of a project with volunteering Member States aiming at estimating the counterfeit ratio among coins in circulation.
- setting-up a central register gathering information on the discovered illegal mints and major counterfeit classes.

A number of cases of medals and tokens were also discussed in the CCEG in the framework of the Council Regulation 2182/2004 of 6 December 2004 concerning medals and tokens similar to euro coins.

As of December 2010, the Commission empowered the Commissioner with responsibility for Anti-Fraud, to specify (in accordance with the above mentioned regulation), if:

- Metallic object can be regarded as a medal or token
- Medal or token fall within the prohibition
- Terms 'euro', 'euro cent' and euro symbol, can be used on the surface of medal and tokens.

3.2 Other institutional groups

During 2010, the ETSC regularly informed the following groups about the situation of coin counterfeiting and discussed possible actions to be undertaken:

- The Mint Directors Working Group (MDWG), which brings together the heads of the Mints of the EU Member States. In that framework, Commission/OLAF promoted and cooperated in the elaboration of a study concerning higher security characteristics for coins and has initiated a study on the measurement of the conductivity of euro coins.
- The international Mint Directors Conference (MDC), comprising participants from official mints throughout the world, as well as industrial observers. In the framework of the MDC's Technical Committee, OLAF chairs the Subcommittee on counterfeit and unfit coins, aimed at better authentication of circulating coins and stronger international cooperation in technical matters and with law enforcement. In 2010, Commission proposal for EU Regulation 1210/2010 served as the basis for the "MDC Guideline on Coin Authentication and Handling of Unfit Coins", adopted in September 2010 by the biennial Mint Directors Conference.
- The Euro Coin Sub-Committee (ECSC) of the Economic and Financial Committee, which brings together representatives from the coin issuing authorities of the Member States. Commission/OLAF initiatives are systematically discussed in that group (in 2010, mainly new proposal for the authentication regulation)
- The Euro Counterfeiting Experts Group (ECEG), functioning in the framework of the Advisory Anti-fraud Coordination Committee (Cocolaf). This group, chaired by OLAF, brings together counterfeit experts from law enforcement, central banks and ministries. A number of coin protection

related issues were discussed in that Group, in 2010, namely the legislative initiative concerning coin authentication, as well as the Pericles actions.

- The ECB's Counterfeit Working Group (CWG) concerning counterfeit banknotes. Also, the ETSC continues to contribute to the improvement and testing of the CMS database, which is administered by the ECB.
- Europol's Forgery of Money Group. The ETSC highlights the counterfeit coin aspects at the Europol meetings and provides assistance to Europol and National Central Offices (NCOs). The ETSC also maintains contact with the Counterfeit Currency Unit of the General Secretariat of Interpol.
- The Euro Cash User Group (ECUG). Meetings are organised by the Commission and the ECB in order to inform the main users of euro cash in the private sector about developments concerning euro banknotes and coins, including counterfeits

On top of the regular meetings, on 28 and 29 October 2010 the European Anti-Fraud Office organised, together with the European Central Bank, the European Payments Council (EPC) and the European Security Transport Association (ESTA), the conference "**Reinforcing the protection of the euro: a shared responsibility**".

Topics included new legislative initiatives at EU level and recent developments in combating the crime of euro counterfeiting. The event served as a platform for an exchange with private sector coin-processing and coin operated industry.

4. SPECIFIC INITIATIVES CONCERNING THE PROTECTION OF EURO COINS

4.1 Pericles actions for the protection of euro coins

The 'Pericles' Programme is a Community financing instrument aimed at reinforcing the protection of the euro banknotes and coins against counterfeiting, by means of seminars, conferences, staff exchanges, studies and other actions undertaken by Member States or the Commission. In the year 2010, the Pericles Programme financed a number of initiatives specifically or equally oriented to the protection of euro coins, as follows.

Conductivity study. The Commission/OLAF commissioned a second step to technical study on calibration methods for measuring the electrical conductivity of coins. This parameter is used for the reading of coins in coin-processing machines and therefore also for the detection of counterfeits. The study started in 2007 was finalised in 2009. The new task will involve a thorough analysis of uncertainties and the resulting measurement precision as well as a comparison between the current calibration practice of European Mints and the proposed calibration procedure from the first service contract

The ETSC's goal, is to ensure that the electrical conductivity of coins can be measured in a precise and consistent way, throughout the EU and internationally.

Training. The ETSC provided specialised training on counterfeit euro coin analysis and classification to NCB and police experts from Serbia and FYROM.

4.2 Coin-related legislative developments

The year 2010, marks significant development concerning legislation to protect the euro. In September 2009 the Commission presented a proposal for a **Regulation concerning authentication of euro coins and handling of euro coins unfit for circulation**. The new Regulation **1210/2010**, adopted in December 2010, constitutes the legally binding instrument necessary for guaranteeing equal standards for the authentication of euro coins throughout the euro area. It introduces specific obligations with regard to the authentication procedures to be applied by the institutions concerned, and the necessary controls to be conducted by Member State authorities. Furthermore, it includes binding provisions concerning the handling of coins which are unfit for circulation, as a result of long use, accident or damage. The new procedures on euro coins are complementary to those established by the European Central Bank concerning the authentication and fitness sorting of euro banknotes.

4.3 Cooperation with third countries

Euro coins circulate not only within the EU but also outside its territory. It can be expected that the same holds for counterfeit euro coins. In order to protect euro coins outside the EU, OLAF/ETSC signed a cooperation arrangement in 2010 with Turkey, which will be followed by a training for Turkish experts at the French Mint premises in Pessac.

4.4 Other potential threats to euro coins

Besides counterfeiting, there are other potential threats for the use of euro coins in hand-to-hand transactions and vending machines. These threats include foreign coins, slugs, blanks, medals and tokens similar to euro coins. The latter two have already been mentioned in section 3.1.

During 2010 no foreign coins were detected, which could be confused with genuine euro coins (either by its aspect of physical characteristics).

Slugs are coin-like objects specifically produced to imitate the physical properties of genuine coins and are typically aimed at fraudulent use in vending machines. In 2010, no significant cases have been reported.

Some blanks, intended for minting genuine euro coins, have been detected in circulation. As the materials of the blanks correspond to the materials used for the euro coins, it is difficult to detect them in vending or sorting machines. The quantities involved are relatively low and require action mainly at national level.

5. Conclusions

Developments in 2010 confirmed the success of the policy applied to protect the euro coins in particular against counterfeiting. The annual report shows the following:

- The number of counterfeit euro coins found in circulation have remained under 200.000 pieces per year (which means 1 counterfeit coin for 86.000 genuine ones)
- Counterfeiters are deterred by the measures applied, which is illustrated by the decreasing number of new types of counterfeit coins found in circulation
- Small number of coins seized before entering into circulation may indicate drop in the counterfeiting activities

Nevertheless the number of new types of counterfeits remains significant and so is the number of still operating illegal mints. This means that the criminal potential is present and that continuous vigilance and cooperation is necessary to guarantee the confident use of euro coins. Specifically, the impact of future action will have to be directed towards the following:

- Increase of vigilance by law enforcement, including non EU countries
- Cooperation with mints and private industry players in order to ensure the identification of counterfeits
- Implementation by the competent authorities in Member States of the authentication procedure, which become mandatory at the beginning of 2012
- Continuing study on the detection methods and security features of the coins, in order to keep advance over counterfeiters.