

“Adverse Analyzing”

A European Study of Anti Doping Organization Reporting Practices
and the Efficacy of Drug Testing Athletes



“Adverse Analyzing”

A European Study of Anti Doping Organization Reporting Practices and the Efficacy
of Drug Testing Athletes

Contributors: Walter Palmer, Simon Taylor and Andrew Wingate

Research by Andrew Wingate

May 12, 2011

UNI Global Union

Nyon, Switzerland
8-10, avenue Reverdil
1260 Nyon / Switzerland

Tel: +41 22 365 21 00
Fax: +41 22 365 21 21

Email: info@uniglobalunion.org

Website: www.uniglobalunion.org

Table of Contents

Introduction

Section 1: Factors Limiting Data Collection	1
1. Limited Availability of NADO Annual Reports	5
a. Table: Availability of NADO Annual Reports	
i. Note on the French and Russian Reports	7
b. Lack of centralized information on NADO websites	
c. Table: WADA reporting – 2008 vs. 2009	9
d. Potential Code Violations	11
i. Immediate Conclusions	
ii. Possible Explanation of the Situation	
iii. Problems and Issues not Resolved	12
iv. Other Problems and Anomalies not Answered by the Code Compliance Report	14
v. Summary of Conclusions on Code Violations	16
2. Lack of a standard approach to the listing of sports and sport categories	18
3. Ambiguous or general sport categories	
4. Lack of complete reporting	
5. Lack of a standard approach on third party testing	20
a. Overview and Comments	
b. Table: Comparison of Report Contents	
c. Summary	22
d. Interesting Individual Cases	
i. Germany	23
ii. Latvia	
iii. Netherlands	
iv. United Kingdom	24
6. Variation of Reporting Practices in Key Areas	25
a. Violations	
b. Substances	27
c. Positives (Adverse Analytical Findings – AAFs)	28
d. Therapeutic Use Exemptions	
e. Missed tests	
f. Reporting failures	
Section 2: Analysis of the Available Data	29
1. Testing	
a. Total Number of Reported Tests – (Table)	30
b. Number of tests in and out-of-competition	
2. Violations	31
a. Total number of reported violations	
i. Interesting Individual Cases	32
1. Belgium	
2. Germany	
3. Netherlands	33

4. Luxembourg	
5. United Kingdom	
b. Sports in Which Violations occurred in 2009	34
c. Number of Violations per Sport	
d. Analysis – Number of Violations per Sport	35
e. Breakdown of Violations by Sport	
f. Number of violations in and out of competition	65
g. Number of violations in and out of competition per sport	66
h. Analysis – In and Out-of-Competition	68
i. Table: Table – Ratios: Number of tests to number of violations per NADO	
j. Interesting individual cases	69
3. Substances	
a. Introduction	70
b. Initial Plan	
c. Problems of categorization and substance identification	71
d. The amended table	72
e. Table description	
f. Table: Violations: Total number of violations per sport categorized by substance	73
g. Interesting Individual Cases	76
h. “Multiple Violations”	
i. Non-identified substances	
j. General analysis of substances and violations	77
k. General analysis of substances and sports	
l. Cannabis	78
Section 3: Executive Summary	80

Introduction

Articles of the 2009 WADA Code relevant to this report

14.4 *“Anti-Doping Organizations shall, at least annually, publish publicly a general statistical report of their Doping Control activities with a copy provided to WADA. Anti-Doping Organizations may also publish reports showing the name of each Athlete tested and the date of each Testing.”*

14.5 *Doping Control Information Clearinghouse WADA shall act as a central clearinghouse for Doping Control Testing data and results for International-Level Athletes and national-level Athletes who have been included in their National Anti-Doping Organization's Registered Testing Pool. To facilitate coordinated test distribution planning and to avoid unnecessary duplication in Testing by the various Anti-Doping Organizations, each Anti-Doping Organization shall report all In-Competition and Out-of-Competition tests on such Athletes to the WADA clearinghouse as soon as possible after such tests have been conducted. This information will be made accessible to the Athlete, the Athlete's National Federation, National Olympic Committee or National Paralympics Committee, National Anti-Doping Organization, International Federation, and the International Olympic Committee or International Paralympics Committee.*

The point of departure

Athletes, in general, are unreservedly in favour of clean sport and wish to compete on a level playing field, while remaining fully supportive of WADA's guiding aim to standardise and promote effective and efficient global anti-doping tests to realise a doping-free sporting experience. We have a vested interest in ensuring that the system is legal, effective and proportionate. A decade after the advent of WADA and the subsequent implementation of the WADA Code it is timely and important to review the effectiveness of the Code from the athletes' perspective.

Whereas, top athletes are required to give up some of their fundamental rights in order to participate in national and international sporting events, it is critically important to them that they are able to assess the efficacy of the anti-doping system as administered by WADA, National Anti Doping Organizations and International Federations. On behalf of our members, the European Elite Athletes Association and UNI Sport PRO Global Union undertook to accomplish just that in the autumn of 2010. One important element in this review was to assess WADA's annual activity reports published on its website.

Under Articles 14.4. and 14.5 of the WADA Code, the World Anti Doping Agency and National Anti Doping Organizations, as signatories of the WADA Code, make a commitment to transparent and comprehensive statistical reporting. NADOs are required to “at least annually, publicly publish a general statistical report” of their doping control activities. WADA commits itself to act as a “central clearinghouse” of that information and to make it “accessible to the Athlete”.

In its central clearinghouse role, WADA published two statistical reports for 2009. One, “ADO Statistics Report” reports the number of “adverse analytical findings” and “anti-doping rule violations” submitted by International Federations and NADOs; the other, “Laboratory Statistics” showing the raw data delivered from the 35 WADA accredited laboratories.

The "Laboratory Statistics" report provides the total number of A Samples tested and totals for "Atypical Findings" and "Adverse Analytical Findings".

An "Atypical Finding" is defined as *"a report from a laboratory which requires further prior to the determination of an Adverse Analytical Finding"*.

An "Adverse Analytical Finding" is defined as *"a report from a laboratory (that) identifies in a Sample the presence of a Prohibited Substance or its Metabolites or evidence of the Use of a Prohibited Method"*.

The report also states: *"These figures may not be identical to sanctioned cases, as the figures given in this report may contain findings that underwent the Therapeutic Use Exemption (TUE) approval process."* (A TUE authorizes an athlete to use a substance on the prohibited list to treat an illness or condition).

The "Laboratory Statistics" report does not give a total for the number of sanctioned cases or TUEs granted (It could not as laboratories are not responsible for either of these processes). To judge the effectiveness of anti-doping testing it is necessary to know the number of sanctioned doping violations (ADRVs), not the number of positive tests (AAFs).

Whereas National Anti Doping Organizations and International Federations decide if a positive test is a doping violation, we should expect to find violation and TUE totals in the "ADO Statistics Report". This is not the case. The ADO report contains only two columns. Next to each Anti-doping Organization (International Federations and NADOs) is listed a corresponding number of AAFs and "Anti-Doping Rule Violations" (ADRVs). The report does not give the overall total of ADRVs. A calculator is needed.

The total number of samples analyzed by WADA laboratories in 2009 is **277,928**. The total number Anti-Doping Rule Violations in the 2009 ADO Statistics Report is **758**.

Therefore, according to WADA's published statistics only **.27%** of samples tested resulted in a doping violation.

With such a low rate, one can only come to one of two conclusions; either the use of PEDs to cheat in sport is occurs at a substantially lower rate in sport than generally believed or the present system is astoundingly ineffective at catching athletes cheating through the use of PEDs. However, through the research done on this report, a third very disturbing possibility emerges - that the reporting behind the numbers is incomplete, thus undermining the entire system's credibility.

In addition to this remarkable statistic, the data provided by WADA was extremely limited. The data does not allow for even basic questions – such as the total number of reported violations per sport - to be answered.

WADA was contacted to request more detailed statistics. WADA responded that it did not have and could not provide such information because currently it did not receive exhaustive data from the ADOs.

This lack of data not only hindered the development of our own position but also raised serious concerns for us about the integrity of WADA's "fight against doping". We therefore undertook to produce a complimentary report that would allow us to

support our positions regarding the reform of anti doping rules with the best data possible.

The result is this report that will outline the extent to which WADA and the signatories to the WADA Code are living up to their commitment to transparency regarding statistical reporting and analyse the available data. Finally, conclusions will be drawn based on this analysis and several recommendations will be made.

Methodology

The original objective of this project was to produce a complimentary report to the WADA annual reporting by compiling the latest statistics (2009) using the published reports of the 49 European NADOs listed on the WADA website as signatories of the WADA Code. It was anticipated that the annual reports would be easily accessible and contain sections that would be comparable. The reports would be analyzed in key areas that would allow athletes to answer critical questions regarding the implementation of anti doping rules – such as:

Is the use of performance enhancing drugs a problem in my sport?

How does my sport compare to other sports?

Is the number of tests I undergo and the invasive whereabouts rules worth the results?

How effective is out-of-competition testing?

How effective is my countries NADO in comparison to others?

To answer these questions data from the following areas was anticipated to be in the annual reporting:

- The total number of tests conducted
- The total number of positive tests (AAFs)
- The total number of TUEs.
- The total number of violations (ADRVs)
- The sports where tests were conducted
- The number of tests per sport
- The number of violations per sport
- The number of tests conducted in and out of competition
- The number of tests per sport, in and out of competition
- A listing of sports where tests were conducted
- The number of violations per sport, in and out of competition
- The number and ratio of violations for the use of cannabis
- The type of substances found broken down by ADO and/or sport
- The number and frequency of other potential violations such as whereabouts failures, refusals and/or missed tests

It soon became apparent that the report could not be completed *as envisaged* because there were significant obstacles at each level. First, and foremost, many of the reports were simply not available. Second, some of the published reports did not contain enough information to be used as part of the study. Third, there was a wide disparity in the method of reporting and the contents between the NADOs that did publish an annual report. These limitations hindered the reports compilation and

made a comparison of annual reports and comprehensive analysis of these statistics extremely difficult.

Due to these significant obstacles, the scope of the envisioned statistical summary was necessarily curtailed and the final statistical analysis will only take into account the available data sets in each category.

Structure of the report

In the first section of this report, the factors limiting the analysis of the data will be laid out; the availability and the contents of the NADO annual reports will be assessed and compared. Then, based on the available data, data samples will be analyzed. Finally, in the Executive Summary, conclusions will be drawn and recommendations given.

Section 1. - Factors Limiting Data Collection

As stated in the introduction, several factors limited the ability of the researchers and authors to complete the report as hoped. This section will catalogue these issues.

1. Limited Availability of NADO Annual Reports

49 European NADOs (as listed in WADA's website under "List of National Anti-Doping Organizations") are listed as signatories of the WADA Code on WADA's website. Of these, only 37 had websites and only 20 published some form of a report on that website.

It must be noted that Montenegro does not appear on WADA's aforementioned "list" but does have an NOC acting as its NADO and appeared on WADA's "ADO Statistics" report of September 2009. It has been included in the table below.

a. **TABLE:** Availability of NADO Annual Reports

Country	NADO?	Website?	2009 Report on Website?	RADO member?
Albania	Yes	-	-	Yes
Andorra	Yes ¹	-	-	-
Armenia	Yes	-	-	Yes
Austria ²	Yes	Yes	-	-
Azerbaijan	Yes	-	-	Yes
Belarus	Yes	-	-	Yes
Belgium (Flemish)	Yes	Yes	Yes	-
Belgium (French)	Yes	Yes	Yes	-
Belgium (Brussels)	Yes	-	-	-
Belgium (German)	Yes	-	-	-
Bosnia	Yes	Yes	-	Yes
Bulgaria	Yes	-	-	-
Croatia	Yes	Yes	-	-
Cyprus	Yes	Yes	-	-
Czech Republic	Yes	Yes	Yes	-
Denmark	Yes	Yes	Yes	-
Estonia	Yes	Yes	-	-
Finland	Yes	Yes	Yes	-
France	Yes	Yes	Yes	-
Georgia	Yes	-	-	Yes
Germany	Yes	Yes	Yes	-
Greece	Yes	Yes	-	-
Hungary	Yes	Yes	-	-
Iceland	Yes	Yes	-	-

¹ Andorra has an anti doping "commission" as opposed to a fully fledged NADO

² Austria's NADO website only displays a list of athletes caught in 2009 – with little other data available.

Ireland	Yes	Yes	Yes	-
Italy	Yes	Yes	-	-
Latvia	Yes	Yes	Yes	-
Lithuania	Yes	Yes	-	-
Luxembourg	Yes	Yes	Yes	-
Macedonia	Yes	-	-	Yes
Malta	Yes	Yes	-	-
Monaco	Yes ³	Yes	-	-
Montenegro	<i>NOC</i>	-	-	Yes
Netherlands	Yes	Yes	Yes	-
Norway	Yes	Yes	Yes	-
Poland	Yes	Yes	Yes	-
Portugal	Yes	Yes	Yes	-
Romania	Yes	Yes	Yes	-
Russia ⁴	Yes	Yes	-	Yes
San Marino	Yes ⁵	Yes	-	-
Serbia	Yes	Yes	Yes	Yes
Spain	Yes	Yes	Y/N	-
Slovakia	Yes	Yes	Yes	-
Slovenia	Yes	Yes	-	-
Sweden	Yes	Yes	Yes	-
Switzerland	Yes	Yes	Yes	-
Turkey	Yes	Yes	-	-
United Kingdom	Yes	Yes	Yes	-
Ukraine	Yes	-	-	Yes
Totals 46 Nations	49 NADOs	37 with websites	20 reports Available	13 RADO members

Table Key

NADO? - WADA has a page on its website which lists all the NADOs or bodies acting as NADOs which have accepted the Code, and therefore theoretically under the obligation of Code article 14.4 have agreed to produce annual reports and submit general statistical findings the WADA.

Website? - As WADA's anti doping rules and their application rely heavily upon the internet, it is important to note whether or not the NADO has a functioning website (or at least a web page)– an online presence being encouraged by WADA. It is primarily via the web that NADOs publish their annual reports and in accordance with article 14.2.4 any athlete caught in violation of the Code must be named on their websites.

2009 Report on website? – This section of the table states if the annual reports or general statistical summaries of findings for that year are publicly available on the website (if the nation has website/page for its ADO) as demanded by the 2009 Code

³ Monaco has an anti doping "committee" as opposed to fully fledged NADO

⁴ There is currently an annual report available from the Russian NADO for 2009. See "Note on French and Russian Reports" below.

⁵ San Marino has an anti doping "committee" as opposed to fully fledged NADO

under Article 14.4. It must be noted that the article requires that the report should be publicly available for at least a year after its publication and submission to WADA – although most NADOs do not remove their previous reports if they were made available on their websites.

RADO member? – Some of the nations not producing annual reports at the moment may not be doing so because of a combination of factors including not yet having an independent NADO, or one that currently lacks resources or experience. RADOs were set up by WADA to pool the resources of nations with these problems in order to implement the Code more effectively and encourage the development of national testing programmes. Being the member of a RADO may indicate that the nation or NADO has not yet the wherewithal to produce an independent report.

Note on the French & Russian Reports

Since this study was written, two new annual reports were released by both Russia and France. The reader of this study must be aware of this as the report has not been updated to take into account both new releases.

France: The French “report” discussed and used in this study is the “Analyse des Resultats de l’Année 2009” which is a four page document containing just the year’s test statistics which was released in April 2010.

The French NADO’s newer full report for 2009 can be found here;
https://www.aflid.fr/docs/ressource297_RA_aflid_bd.pdf

Russia: At the time this report was compiled and written, the Russian NADO had not released an annual report for 2009, hence in the chart above and in the following analyses we speak of only 20 NADOs having their annual reports online, as opposed to 21 should Russia’s be counted.

The Russian NADO’s new full report for 2009 (in English) can be found here:
http://www.rusada.ru/files/annual%20report_eng.pdf

b. Lack of centralized information on NADO websites

Latvia: Has a summary of testing statistics and list of violations by sport, substance, and punishment on different webpages.

Czech Republic: Has a summary of testing statistics and list of violations by sport, substance, and punishment on another webpage

Slovakia: Has a summary of testing statistics and list of violations by sport, substance, and punishment on another webpage

Luxembourg: The NADO lists the number of doping controls it carried out per sports federation / domestic competition. Not a “Report” in the standard sense.

Romania: Lists the athletes caught, per sport, and substance. Although it goes further than the requirements of article 14.2.2 in that it also states the number of tests conducted in/out competition for perspective.

c. WADA Reporting – 2008 vs. 2009

Although this report focuses on statistics and annual reports from 2009, WADA’s website has both the 2009 and 2008 ADO “test statistics” summary available. Contrasting that with the statistics and/or annual reports gathered on NADO websites from both 2009 and 2008 is the ideal way to track the NADO’s consistency in producing annual reports and WADA’s consistency in including their findings in their own annual summaries over a long period of time.

	<u>2009</u>			<u>2008</u>	
	NADO in WADA “Test Statistics” report?	Annual reports available on website?		NADO in WADA “Test Statistics” report?	Annual reports available on website?
Albania	-	-	ALB	-	-
Andorra	-	-	AND	-	-
Armenia	Yes		ARM	-	-
Austria ⁶	Yes	-	AUT	Yes	-
Azerbaijan	-	-	AZE	-	-
Belarus	Yes	-	BLR	-	-
Belgium (Flemish)	-	Yes	BEL	-	Yes
Belgium (French)	Yes	Yes	BEL	-	Yes
Belgium (Brussels)	-	-	BEL	-	-
Belgium (German)	-	-	BEL	-	-
Bosnia	-	-	BIH	-	-
Bulgaria	-	-	BGR	-	-
Croatia	-	-	HRV	Yes	-
Cyprus	-	-	CYP	Yes	-
Czech Republic	-	Yes	CZE	Yes	Yes
Denmark	Yes	Yes	DNK	Yes	Yes
Estonia	Yes	-	EST	Yes	-
Finland	Yes	Yes	FIN	Yes	Yes
France	-	Yes	FRA	-	Yes
Georgia	Yes	-	GEO	-	-
Germany	Yes	Yes	DEU	-	Yes
Greece	-	-	GRC	-	-
Hungary	-	-	HUN	-	-
Iceland	-	-	ISL	Yes	-
Ireland	Yes	Yes	IND	Yes	Yes
Italy	-	-	ITA	Yes	-
Latvia	-	Yes	LVA	Yes	Yes
Lithuania	-	-	LTU	-	-
Luxembourg	-	Yes	LUX	Yes	Yes
Macedonia	-	-	MKD	-	-
Malta	-	-	MLT	-	-

⁶ Austria’s NADO website only displays a list of athletes caught in 2009 – with little other data available.

Monaco	-	-	MCO	-	-
Montenegro	Yes	-	MNE	-	-
Netherlands	-	Yes	NLD	Yes	Yes
Norway	Yes	Yes	NOR	Yes	Yes
Poland	Yes	Yes	POL	Yes	-
Portugal	-	Yes	PRT	-	Yes
Romania	Yes	Yes	ROM	Yes	Yes
Russia ⁷	-	-	RUS	-	-
San Marino	-	-	SMR	-	-
Serbia	-	Yes	SRB	Yes	Yes
Spain	Yes	Y/N	ESP	-	-
Slovakia	Yes	Yes	SVK	-	-
Slovenia	-	-	SVL	-	-
Sweden	-	Yes	SWE	-	Yes
Switzerland	Yes	Yes	CHE	-	-
Turkey	-	-	TUR	-	-
United Kingdom	Yes	Yes	GBR	Yes	Yes
Ukraine	-	-	UKR	-	-
TOTALS 46 Nations 49 NADOs	18 included	20 available		18 included	16 available

Table notes:

Belgium: Aside from the Flemish and Walloon communities, NADOs also exist for the city of Brussels and the German Community. The German community was judged non-compliant in 2008 by WADA. Neither the City of Brussels nor the German Community have any anti-doping statistics or reports available online.

Spain: It has a “report” of a sort – but includes no statistics. Cannot be included in the study.

Austria: No annual report publicly available. Some basic testing statistics were found in its 2009 “introduction to the Austrian NADO” .pdf file available for download in its website. This was not used in the report.

Note*

Portugal, Sweden and France’s NADO reports⁸ have issues with their content or statistics.

⁷ See “Note on French and Russian Reports” section above.

⁸ Ibid.

d. Potential Code Violations

NADOs are bound to following the Code, however it must be noted that ultimate responsibility for applying the WADA Code lies with the national governments. Although this section of the report is critical of NADOs where Code compliance appears to be an issue, it is important to remember that there is a shared responsibility in the application and enforcement of the Code.

- (1) What is immediately apparent from WADA's summary of statistics for 2009 is that of the 49 European NADOs listed on WADA's website, only 18 appear to have submitted their annual reports or findings to WADA as is required under **Article 14.4**. WADA states that it is committed to receiving, summarising and reporting on all the statistics, which it receives from various ADOs. Thus if they are not listed on this summary (for lack of any statement to the contrary by WADA) we can assume that NADOs not appearing on the list have not submitted a report.
- (2) **Article 14.4** also requires that all NADOs produce an annual report of their findings which is to be "publicly displayed", yet **only 20** European NADOs out of WADA's listed 49 have some form of "annual report" or general statistical summaries on their websites.

Immediate Conclusions

- (1) We can conclude that in 2009 **only 10 nations** (or 11 NADOs if one counts the Belgian Walloon and Flemish NADOs separately) appear to be in full compliance with WADA Code's article 14.4 which requires that;
 - (a) All NADOs submit an annual report to WADA and,
 - (b) All report should also be available to the public (preferably online as indicated by a related article, 14.2.4.

Nevertheless, the fact that only 10 out of a the 49 European NADOs listed on WADA's website (and indeed 10 of the 18 NADOs listed in WADA's "ADO Test Statistics") appear in full compliance with **Article 14.4** raises serious questions about the readiness and competency of the majority of NADOs to effectively implement WADA's Code in full. Furthermore, a number of questions are raised about the accuracy and transparency of WADA's reporting and how effectively or with what degree of rigour WADA upholds the Code.

Possible Explanation of the Situation

The reasons why many of these NADOs have not submitted an annual report to WADA or published the statistics they gathered online are mentioned in WADA's 2008 study on Code Compliance (which can be found in the Appendix). This lists a number of NADOs which were exempted from being labelled "non compliant" in 2008 and gives explanations for this:

First, WADA lists the nations considered to be code compliant, having "have rules in line with the Code":

American Samoa, Aruba, Australia, Bermuda, Brazil, Canada, China, **Croatia, Czech Republic, Denmark**, Dominican Republic, Ecuador, **Finland**, Ghana, **Great Britain**, India, **Ireland, Italy**, Japan, Korea (Republic of), **Liechtenstein, Luxembourg, Malta, Netherlands**, New Zealand, Nigeria, **Norway**, Puerto Rico, **Romania**, Slovakia, **Slovenia, Sweden, Switzerland**, USA and Venezuela

Second, WADA lists nations that were not yet in full compliance with the **rules** code in 2008 but exempted from being labelled “non-compliant” owing to the progress they were making in adopting the Code:

Argentina, **Austria**, the **French community of Belgium**, Chile, Cuba, **Cyprus, Estonia, France, Germany, Greece, Hungary, Iceland**, Jamaica, **Latvia**, Mexico, **Monaco**, Paraguay, **Poland, Portugal, Spain** and Uruguay

One explanation for the fact that Germany and France both released annual statistical reports in 2009 while nations such as Iceland and Cyprus have not could be that the latter are still in the process of applying the Code’s rules.

Third, WADA lists the NADOs that do not yet “have rules in line with the Code and did not provide WADA with full evidence that they are in the process of adopting rules in line with the revised Code”;

Bolivia, **Bulgaria**, the city of **Brussels-Joint Communities Commission**¹, Israel, Korea (Democratic Republic of), **Lithuania**, Peru, **San Marino** and Chinese Taipei.

WADA subsequently labelled the three highlighted European NADOs as not being in compliance with the Code.

Many of the nations that did not produce annual reports for 2008 and/or 2009 fall into the second group of nations who have not yet adopted all of the Code’s rules. The fact that they appear to have been exempted from being labelled “non-compliant” in their transition period certainly explains why they have not followed Code rules 14.2.2 or 14. Indeed, the European nations mentioned in the third group have been shown to be non-compliant in 2008 – a fact which seems not to have changed in 2009.

Problems and Issues not resolved

Although the compliance report of 2008 was very useful in explaining why some NADOs did not submit reports in 2008, and arguably also in 2009, there are several major issues and problems which are unexplained in the compliance report – some of which still suggest that the Code is not being adhered to by some nations.

Of the list of NADOs shown to be “compliant” (have rules in line with the Code) in WADA’s Compliance Report, four of those nations still appear to have violated the anti doping Code’s rules on reporting anti doping Statistics. Neither Malta, Slovenia, Croatia nor Italy have been mentioned in the WADA 2009 “ADO Test Statistics” – implying their reports were not submitted to WADA before **September 2010** when the table was updated – nor do any have their annual statistics or reports available on their websites. Clearly, this is in violation of the Code.

Another interesting point to mention is that neither Malta nor Slovenia in 2008 appeared to have provided WADA with an annual report, as evidenced by their absence from the 2008 “test statistics” report. By contrast, Italy and Croatia are both listed as having submitted their statistics to WADA in 2008 according to the “ADO Test Statistics” list but these reports are not available on their websites.

If this was really the situation in 2008, the violation of articles 14.2.2 and 14.4 by these supposedly “fully compliant” NADOs leaves a number of questions unanswered. There is nothing mentioned on WADA’s website or on the websites of these NADOs as to why they were listed “fully compliant” while not adhering to these articles in the Code.

All of this suggests that the definition of “compliant” – as shown in WADA’s “Code Compliance” report – has much more to do with the adoption of Code rules by the NADOs and less to do with their actual enforcement.

However, this appears to contradict the definition of “code compliance” given on WADA’s own website;
(<http://www.wada-ama.org/en/Resources/Q-and-A/What-has-WADA-achieved-since-its-establishment-in-November-1999-/>)

What is « Code compliance »?

Compliance with the World Anti-Doping Code (Code)—the document harmonizing regulations regarding anti-doping in all sports and all countries—is the situation in which an anti-doping organization (ADO)—an International Sport Federation (IF), a National Anti-Doping Organization (NADO), a Major Games Organizer, etc.—**finds itself after completing a three-step process in relation to the Code.**

Firstly, an ADO must accept the Code. By doing this, it agrees to the principles of the Code and agrees to implement and comply with the Code. Secondly, the ADO must implement the Code by amending its rules and policies to include mandatory articles and principles of the Code. These anti-doping rules must be submitted to WADA for review, in order for the rules to be pronounced in line with the Code. **Lastly, the ADO must enforce its amended rules and policies in accordance with the Code.**

According to the definition of “code compliance” in the first paragraph, it is only **after** this three-step process that a nation or NADO can be pronounced “fully compliant”.

Why these NADOs are listed as “compliant” in spite of failing to applying key sections of the Code, as demanded in the text above, is nevertheless unclear. Does “full compliance” mean enforcing all the articles of the code or just some of them and, if so, which ones? There is evidently a lack of **clarity** here that needs to be addressed.

Second, Georgia, Albania, Armenia, Azerbaijan, Belarus, Bosnia, Serbia, Macedonia, Moldova, Ukraine, Russia and Montenegro are all members of the Eastern European RADO – set up in 2007 to pool the resources of its 13 member nations and to promote or aid in the creation of local NADOs that can conduct tests independently of the national NOCs or IFs. The RADO would theoretically take part of the responsibility for doping control.

In light of the RADO's vital role in developing these state's anti-doping programmes and WADA's leniency with far more developed nations in the second group listed above (including Germany and Austria), it is reasonable to assume that they too have been exempted from being branded "non compliant". Indeed, WADA makes it clear in the 2008 compliance report that it wishes to apply article 23.4.3 of the 2003 Code which could lead to exemptions for certain developing NADOs; *"In order to identify the "extraordinary situations", WADA should take into consideration the economic and political situation as well as the sports' records and history of each country"*

However, the 2008 compliance report states:

Those NOCs and NADOs that are part of a RADO structure are deemed compliant or provisionally compliant, provided they have entirely committed to their respective RADO and their operations.

This appears to indicate that RADO nations that are signatories to the WADA Code are not exempt from being branded "non compliant". Indeed, Russia - another RADO nation - is branded "non compliant" in the same report. It is not expressed clearly whether or not these RADO nations were exempted from the Code. Again, a lack of information is a major issue here.

The status of RADO members as "compliant" or "provisionally compliant" in spite of the fact that the Code's rules might not have been implemented or enforced at the time the report was written once more shows that "code compliance" has less to do with effective enforcement of the Code but how far the Code's rules and regulations are being adopted (theoretically) by NADOs.

Other problems & anomalies not answered by Code Compliance Report

First, the reliability of WADA's annual statistical reports is cast into doubt because **ten** NADOs which have their 2009 annual reports available online **do not** appear in WADA's 2009 "ADO Test Statistics".

This group includes **Poland** and **Netherlands**, both of which have extremely competent and highly detailed reports available online. Others include Flemish Belgium, the Czech Republic, France, Latvia, Portugal, Sweden, Luxemburg and Serbia (a RADO nation).

As stated in the introduction, if the author of this report would have assumed that the nations listed on WADA's "Test Summary" were the only ones that had public annual reports available, then a considerable number of European states have been missed.

One must not forget that WADA's website shows these results were updated in September 2010. Thus, it does not appear that WADA updates its statistics regularly and that those it provides might therefore not be representative of the global anti-

doping picture. It is extremely unlikely that all 10 NADOs did not submit their reports before the September update – and the French summary of test statistics (*Bilan des contrôles diligentés par l'AFLD pour l'année 2009*) was uploaded onto the NADO's website in **April 2010**.

Furthermore, it cannot be argued that the NADOs that do not appear on WADA's annual statistical summary list did not provide the relevant information to the Anti Doping Organisation. Poland, the Czech Republic, Flemish Belgium and the Netherlands have all notably detailed annual reports available online for public viewing. Indeed, the Netherlands was even featured in WADA's 2008 annual statistical summary, but not in 2009, in spite of producing a virtually identical report. **All of this effectively means that WADA's 2009 annual ADO statistical summary is unreliable and inaccurate.**

No information can be found explaining why these nations with annual reports on their websites have not been added to the 2009 annual statistical summary. The most rational explanation for these discrepancies and contradictions is that WADA has not been updating their received statistics accurately or perhaps that it has not been receiving them. This inference is supported by the fact that in 2008 there were five NADOs which had some form of report or statistical summary online (France, Germany, Flemish Belgium, Portugal and Sweden) but they were not included in WADA's 2008 "ADO Test Statistics" summary either. Since 2008, the number of NADOs that have some kind of report online but not listed in the WADA table has therefore doubled.

Second, there are **seven** nations listed in WADA's statistical summary for 2009 which, by contrast with the previous point, **do not have annual reports publicly** displayed on their NADO's websites in 2009 (or if they are without a dedicated NADO – their NOC's website).

This includes the likes of wealthy nations such as Spain and Austria, and developing nations such as Montenegro, Armenia, Georgia, Belarus and Estonia.

One could speculate that an exception may have been made for the RADO nations (this is not clear because the next Code Compliance report is only to be released in 2011) such as Georgia, Belarus and Montenegro, whereby they are still recognised as "code compliant" as in 2008. Indeed, the same argument could be applied to Spain and Austria – both of which appeared as "code compliant" (as a result of being in the process of synchronising their anti-doping laws with the Code) in 2008 and in the process of adopting WADA Code rules. This is speculation. Until the 2011 compliance report comes out in November it is unclear as to whether or not these nations were exempted from certain Code provisions in 2009.

Nevertheless, if statistics for these nations are available as their listing in the WADA "test report" shows, then it does not make sense that these NADOs have not taken the next step to place themselves fully in line with articles 14.4 and 14.2.2 and released these results into the public domain.

Third, there is no clear reason mentioned as to why Italy and Greece do not have their annual reports available and have failed to submit them to WADA in 2009. Leaving aside the fact that Italy was listed as "compliant" in 2008 (its 2008 report was not made public), both Italy and Greece's NADOs have previous annual reports or statistical summaries available on their websites.

- **Italy's** CONI – an NOC acting as the nation's NADO – has statistics available from for the years 2001-2005 and 2007. But otherwise has not displayed any for public viewing since then but puzzlingly is listed as having submitted a report in WADA's 2008 statistical summary⁹.
- Similarly, **Greece's** NADO contains statistics from anti-doping tests gathered between 2005 to 2007 but is not listed as having submitted anything to WADA in 2008 or 2009 and has not added a fresh report for public viewing since 2007¹⁰.
- **Spain** did produce an “annual report” of a kind in 2009, but which did not include any anti-doping statistics. Spain's CSA has graphs for year each up to 2005 showing which substances were found in their tests.

These facts bring into question once again what is meant by “code compliant” if Italy, listed as compliant with the code, appears not to be. Moreover, it does not have the excuse of “making progress” towards adapting to the WADA Code, as does France or Germany, since the Compliance Report of 2008 implies that Italy is already completely in line with the Code. As for all three nations, it is somewhat surprising that they managed to produce and publish annual reports or statistics in the past and yet have not been able, or simply have not attempted, to release an annual report since then. In the case of Spain and Greece, they do not appear to have submitted their findings to WADA in its 2009 “testing statistics”.

Lastly, a general comparison between the situations existing in 2008 with that in 2009 shows further inconsistencies in reporting by both WADA and the NADOs. This comparison can be made as articles 14.4 and 14.5 remain **unchanged** in the updated 2009 Code – annual reports must still be produced, and WADA is obliged to publish statistical information at least annually.

- Both the French-Belgian NADO and the German NADO have their annual reports for 2009 available online and are named in WADA's annual statistical summary for 2009. However, both also have near identical reports available online for the year 2008, although neither Germany nor French-Belgium is mentioned in WADA's 2008 summary.

This appears to show that WADA has not been updating its NADO statistical summaries regularly because several competent and detailed reports available online in 2009 have not been included in the WADA's summary. By studying the situation in 2008 and comparing it with 2009 we see that this assertion looks to be correct. There is a lack of consistency apparent in these ADO statistical summaries. [As a result, this raises questions about the trustworthiness of WADA's annual statistical summaries.](#)

Summary of Conclusions on Code Violations

The Compliance Report of 2008 on the surface appears helpful in explaining why many of the NADOs listed above have not publicly displayed or submitted to WADA an annual report or statistical summary.

However, this report is over a year old now and its legitimacy is undermined somewhat by the fact that Italy was listed as “code compliant” when it would appear

⁹ http://www.coni.it/index.php?dati_statistici (last visited 9 November 2010)

¹⁰ <http://www.eskan.gr/pubs.php?cat=2&lang=el> (last visited 9 November 2010)

not to be the case. This leads to the conclusion that the “compliance report” looks less at how effectively the Code is being applied but rather how far the Code’s rules adopted by that NADO have been officially accepted. This notion is supported by the slightly vague definition of “code compliance” on WADA’s website and the fact that WADA lists as “code compliant” nations which are only in the **process** of adapting their laws to fit the Code.

The fact that Italy is recorded as being in “full compliance” in 2008 when it does not have its statistics available on the CONI website for that year (and neither in 2009) leaves the **impression** that the Code is being applied haphazardly or unevenly. Article 14.4 and 14.2.2 are clear and leave no room for interpretation over what the obligations of “compliant” NADOs are.

Other interesting cases have to do with Spain and Austria, both of which have compiled anti doping statistics but have not made them available to the public, and Greece and Italy, both of which have produced annual reports or statistical summaries before 2008 – but have subsequently either not released them and/or not submitted them to WADA. No information is given to explain these anomalies.

The compliance report and the Code are not clear on the role of the RADO nations. On the one hand it seems as if they were exempted, but on the other the compliance report implies that signatories of the Code were not. Perhaps we will find out if they were exempted from the Code or violated it in 2011 when the next compliance report is due.

Other problems identified are the fact that 9 NADOs that have annual reports or statistics available (which were used in this report) were not included on WADA’s “ADO Test Statistics” summary. It is surprising that they should not have submitted these findings especially in light of the rigorous standards of statistics offered by Poland and the Netherlands. This leads us to conclude that the statistical summary offered by WADA is not being updated regularly. WADA’s last update to its “ADO Test Statistics” was in September 2010.

Moreover, comparing WADA’s “ADO Statistics” of 2008 and 2009 shows us that these problems were not unique to 2009. In fact, the number of nations that had annual reports on their websites but were not listed in WADA’s statistical reports doubled between 2008 and 2009 from five to ten. Indeed, the Netherlands was listed as having submitted a report in 2008 but not in 2009 – even though both reports are readily available on its website. There is evidently a lack of consistency in statistical reporting.

All of this brings into question the accuracy and reliability of WADA’s statistical summaries and even leads us to question how much statistical data and what kind of data WADA has access too. These ambiguities and concerns undermine trust in WADA and in the Code.

DATA PROTECTION

A Note about Data Protection.

It is well documented that a number of countries have problems with their data protection authorities not permitting the transfer of personal data to WADA.

Whilst it is important that athletes’ personal data is protected there is nothing in the data protection legislations to prevent the compilation of aggregate statistics with

personal details removed. We are therefore not convinced that data protection concerns are responsible for the paucity of statistical evidence.

2. Lack of a standardized listing of sports or sport categories:

If all nations were to test exactly the same sports or sports categories, then a straightforward comparison of data, such as violations per sport, should be easy and straightforward. However, many NADOs test for different sports and sports categories, meaning that in many cases it is difficult to make data comparisons between sports.

Not all NADOs group their findings under the same sporting categories. For instance, Switzerland has separate results tables for “Speed Skating” and “Figure skating”, whereas Slovenia only lists “Ice Skating”. Moreover, UK Sport distinguishes between “Rugby Union” and “Rugby League”, whereas all other NADOs (except France) list these results under the title “Rugby”.

To make the data for these sports or sports categories comparable we must group all sports under more general headings (preferably those recognised by the International Olympic Committee). The table below tries to overcome these problems, with the help of footnoting and commentary, to show which sports had been grouped together.

3. Ambiguous or general sport categories:

Some NADOs have sports categories listed which are general and ambiguous such as the Norwegian category of “Martial Arts”, French “Combat Sports”, Irish “Snowsports”, Dutch “Strength Sports” or Portuguese “Hockey” (not stating what type).

These categories have to be exposed because their existence presents challenges to later statistical analyses. For example should we wish to know how many tests were conducted on Judo (a recognised Olympic sport), we cannot know how many tests under the “marital arts” general category were conducted on Judo – if any.

The problem of ambiguous or general sports categories is particularly prevalent in disability sports (as seen in the table below).

The identification of these ambiguous categories helps to establish how accurate the statistical analysis of individual sports can be considered.

4. Lack of complete reporting:

Some NADOs – such as Denmark or Romania – do not state how many sports they tested in total, only showing the most tested sports or only listing in which sports violations occurred.

Sports – Interesting Individual Cases

- **Romania** published several “Annual Reports”, however they do not state how many sports in total were tested, or the numbers of samples taken per sport.
- **Luxembourg’s** “FLAM” is the Martial Arts Federation, a testing category covering Karate, Taikwando, Judo and Aikaido. No information is given as to which has been tested. Two are recognised Olympic Sports.

- **Finland's** annual report lists all the sports that it tested. However for most of its sports the table gives no figures for how many tests there were per sport.
- **Denmark's** NADO conducts tests on behalf of several institutions (including prisons) but primarily at the request of the Danish NOC. It has a similar problem as Finland in that it only breaks down the number of tests per sport for its top 10 most tested sports. However, unlike Finland and like Romania it does not give a list of other sports tested.
- **Norway** has the same issues as Denmark; it names the top 22 sports tested, but does not name the remaining 23.
- **Sweden & Latvia:** Both have some form of statistical summary of findings on their websites that state the number of tests conducted (in and out of competition) and naming the sport in which the violations occurred. Unfortunately, there is no mention of exactly which sports were tested in 2009.
- **Germany:** The German NADO only gives a breakdown of tests per sport for its out of competition tests, allowing other organisations to conduct in competition tests on their behalf. No full list of sports tested in competition is given. Indeed, in the list of violations discovered at the end of the report, athletes specialising in Triathlon, Powerlifting, Eisstock and Billiards were all found to have committed in-competition violations – but there was no previous mention of these sports being targets for testing. We do not know how many sports were tested on Germany's behalf in competition in all non-conformed sport boxes.
- **Other:** Some of the NADOs are very un-specific with what they are testing – and therefore these sports cannot be included in later analyses of statistics.
 - **Netherlands** = has “Roller sports and Bandy” along with “Rollerskating”, “Krachtsport” (strength sports from tug-of-war, fitness to weightlifting) and “Oosterse gevechtkunsten” (martial arts – not including Judo, Karate and Taekwondo)
 - **France** has a general category called “Contact Sports” and the FSGT– sports organisation.
 - **Norway** has a “Martial Arts” category.
 - **Ireland** has “Snowsports” which includes Biathlon as well as Skiing and Snowboarding
 - **Portugal** = lists “Hockey” results but fails to mention what type of hockey.
 - **Switzerland** states that a violation occurred in the “Bobsleigh and Athletics” sports category.
 - **”Motorsport”** is a general category used by the United Kingdom, Ireland, Poland and the Netherlands.

WADA Annual Reporting

WADA's "ADO Statistics" reports regrettably do not state which sports have been tested, and its "Laboratory statistics" provide little useful information in this regard.

5. Lack of standard approach to inclusion of Third party testing

a. Overview and Comments

Another major problem with the publicly available statistics is that most NADOs conduct tests not only for their National Programmes but also on behalf of third parties such as other NADOs, IFs, WADA and even at the request of other sports organisations. The main problem is that some NADOs only display statistical breakdowns of all the data gathered from the National Anti-Doping Control Programmes and provide only a cursory mention as to how many tests were conducted on behalf of third parties. Moreover, other NADOs in their annual reports or statistical summaries do not state whether or not the statistics displayed are restricted to the National Testing Programmes or include data from third parties such as Luxembourg, the Czech Republic or Slovakia.

A difference in specification and a lack of clarity creates difficulties in any comparison of data and analysis of the European anti-doping programme.

b. Table Comparison of Report Contents	Testing
	<i>Does the report state...</i>
Available annual reports or online statistical summaries of 2009	Does NADO combine statistics or results for National & 3 rd party tests?
Belgium (Flemish)	Yes
Belgium (French)	Not sure
Czech Republic	Not sure
Denmark	No
Finland	No
France	No
Germany	Yes
Ireland	No
Latvia	Not Sure
Luxembourg	Not Sure
Netherlands	Yes
Norway	No
Poland	No
Portugal	No
Romania	No
Serbia	No
Slovakia	Yes
Sweden	No
Switzerland	No
United Kingdom	Y/N
<i>Totals "Yes" =</i>	4

- **Flemish Belgium:** There is no clear indication that the statistics displayed in its report are purely of the national testing programme or if they were tests done on behalf of third parties. However, the large number of tests on Bodybuilding suggests that it also tests for third parties.
- **French Belgium:** There is no clear indication that the statistics displayed in its report are purely of the national testing programme or if they were tests done on behalf of third parties.
- **Czech Republic:** There is no indication that the statistics displayed in its report are purely of the national testing programme or if they were tests done on behalf of third parties.
Indeed, the Czech NADO shows that it caught a foreign athlete, a Latvian, using prohibited substances but it is not clear whether this test was part of the national programme or on behalf of another ADO or IF.
- **Denmark:** It differentiates between National and Third Party testing and results. However, it only gives a breakdown of statistics (tests per sport, violations per sport) for its national testing programme results.
- **Finland:** It differentiates between National and Third Party testing and results. However, it only gives a breakdown of statistics (tests per sport, violations per sport) for its national testing programme results.
- **Germany:** Exceptional case (see below)
- **Ireland:** It differentiates between National and Third Party testing and results. However, it only gives a breakdown of statistics (tests per sport, violations per sport) for its national testing programme results.
- **Netherlands:** Exceptional case (see below).
This report distinguishes between the number of tests done for the national programme and on behalf of third parties. However, the testing results and tests per sport give the total number of tests conducted by the NADO while the report does not separate national programme and third party testing statistics.
- **Norway:** It differentiates between National and Third Party testing and results. It does give a small breakdown of the number of samples per anti-doping request by a third party but does not give any results.
- **Poland:** It differentiates between National and Third Party testing and results. It does give a small breakdown of the number of samples per anti-doping request by a third party but does not give any results.
- **Latvia:** Exceptional case (see below)
- **Luxembourg:** There is no clear indication that the statistics displayed in its report are purely of the national testing programme or if they were tests done on behalf of third parties.
The report, however, lists the number of controls/tests per athlete in each event and states clearly the number of “foreign” athletes tested in each case.

- **France:** It differentiates between National and Third Party testing and results. However, it only gives a breakdown of statistics (however limited) for its national testing programme results.
- **Portugal:** It differentiates between National and Third Party testing and results. However, it only gives a breakdown of statistics (tests per sport, violations per sport) for its national testing programme results.
- **Romania:** It differentiates between National and Third Party testing and results. Although it clearly states that 3030 tests/controls were conducted for the national programme, the report then only gives details of each case where an athlete committed a violation as opposed to a statistical breakdown.
- **Serbia:** It differentiates between National and Third Party testing and results. However, it only gives a breakdown of statistics (tests per sport, violations per sport) for its national testing programme results.
- **Slovakia:** There is no indication that the statistics displayed in its report are purely of the national testing programme or if they were tests done on behalf of third parties.
Indeed, the Slovak NADO shows that it caught a foreign athlete, an Austrian, using prohibited substances. It appears that both third party and national testing statistics were combined in their annual statistical report for 2009.
- **Switzerland:** It differentiates between National and Third Party testing and results. However, it only gives a breakdown of statistics (tests per sport, violations per sport) for its national testing programme results. In spite of the fact that the results table does not specifically state that the 24 athletes who violated the code were tested under the National Testing Programme, the introduction to the English edition of Switzerland's annual report states;

“Antidoping Switzerland carried out 1479 of its own controls, exceeding the budgeted number of 1400 and increasing the proportion of out-of-competition controls by 15% in comparison with 2008. A total of 24 infringements against anti-doping regulations were recorded.” - page 16

Consequently we can reasonably assume the results in the Swiss NADO report are of the Swiss national testing programme.

- **United Kingdom:** Exceptional case (see below)

c. Summary

- **10 annual reports** clearly distinguish between National Programme and Third party testing, and none appear to give a full breakdown of third party tests as they do with National programme tests and results
- **7 annual reports'** either clearly show that they have combined their national programme and third party testing statistics (such as the Netherlands which states it explicitly), or are reports that give no information whether or not they combined their national programme and third party tests (such as both

Belgian NADOs and Luxembourg). The latter still has to be treated as if they combined their anti doping statistics out of caution.

d. Interesting Individual Cases

- **Germany** = Germany's NADO conducts frequent out-of-competition tests; however it currently conducts very few in-competition tests. The German annual report only give a breakdown of tests per sport for out-of-competition tests, and nothing for the in-competition tests it conducted or those of IFs and other ADOs which conducted the tests on their behalf. As a result, we cannot give a complete breakdown of in-competition tests.

Interestingly, the German NADO does not make clear in its report which of its sports had been tested out-of-competition by a third party on its behalf. Consequently, it was only in the table listing all of the potential and confirmed violations in 2009 that we discovered that German athletes were tested in competition for Triathlon, Eisstock, Billiards and Powerlifting in 2009. We do not really know which sports were tested for the German NADO in competition.

There were 368 tests listed as having been conducted on behalf of third parties. The report does not state if these were in or out-of-competition tests nor does it make it clear if the violations listed include or exclude the possible results of these 368 tests, although it is most probable that they were included in the results table. Hence, because of the aforementioned ambiguities, we have to include all figures.

- **Latvia** = Latvia's report does not make it clear how many tests were conducted on behalf of third parties. Its statistical summary (available on its website) shows several informative graphs for 2009. The first three graphs divide the number of tests done between "state budget" (or state funded) and "paid services" (tests paid for by others). The number of state funded tests is 166. However, the fourth graph states that 63 of the 219 total tests had their results sent directly to "international federations" leaving 156 tests in the categories "positive cases", "negative cases" and "nav sanemts parauga bojajuma del". Because the figures for state budget tests (166) do not add up to the remaining 156 tests, it is unclear whether or not all these tests were really "national programme" tests just because they were not sent directly to an international federation. Nevertheless, we shall use the figure 156 for total tests.
- **Netherlands** = Although the NADO states the total number of national programme tests, the breakdown of tests per sport and indeed the final results were based on both the national programme and third party testing statistics and results. The NADO identifies whether an athlete caught or accused was Dutch but it is not clear whether all were part of the national testing programmes. It is clear, however, that some were tested on the request of IFs, but for the rest it is not clear who ordered the tests.

As such – although the Dutch NADO states it conducted 2065 tests as part of the national programme out of 2636, and we can identify some athletes who were tested at the request of IFs, we are compelled to use the full figure **2636** in this report so that we can at least attempt to compare the Netherlands' results and statistics with other nations. This way, at least we can be sure that all the sets of information relate directly to each other instead of guessing

which athletes caught were part of the National Testing Programme or how many tests were done per sport as part of the National Testing Programme. As a result, all the variables are known.

- **United Kingdom** = The format of the UK's report poses several problems if we are trying to work out how many sports were tested and how many tests were for third parties or as part of the national programme for 2009. The UK's "annual report" covers its **financial year**, not a calendar year. It is divided into four "quarterly reports" (April-June, July-September, October – December, January – March) meaning that to work out how many tests in and out-of-competition were conducted in 2009 requires some calculation. Moreover, to be sure that we have all of the confirmed "violations" for 2009 we must instead look to the detailed list of violators also available on UK Sport's website.

The main problem with the UK's report is that it divides its overall test statistics into "UK bodies" and "International bodies" and in the following tables instead of breaking down tests on a mere sport by sport basis (like all other NADO reports) the UK NADO breaks tests down first by Sports Organisations. While this means that more calculations are needed to determine how many tests were conducted in and out-of-competition over a calendar year between 4 quarterly reports (tests were carried out for least different 5 Rugby Union sports organisations or events across 2009 including non-UK Union organisations), theoretically it should make the task of identifying the UK organisations that conducted the tests simple.

The acronyms of the organisations for which UK Sport tested are given thus we attempted to use the long list of international federations and international sports organisations available on WADA's website so we knew which statistics not to count in later comparison of all NADO statistics. This would be cross referenced with the list of "National Sport Authorities" and "International Federations" and other lists provided on UK Sport's website¹¹. Many IFs were identified immediately from the lists provided by UK Sport and WADA's website. However, several organisations remained ambiguous or not listed on either website. Some examples include "WS" was one (assuming it means World Snooker), EJU (European Judo Union) and the DRA (assuming it is the Darts Regulatory Authority). Nor was it immediately obvious if "BE" stood for "Badminton England" or "Badminton Europe".

NADOs were also included on the list in every quarter meaning that the note on the first page of the quarterly report stating all "international bodies" tests were conducted "under the jurisdiction of international federations" requires explanation.

In two of the four quarterly reports covering 2009, adding up the data available for the organisations identified as IFs or potentially International Sports Organisations produced results not quite the same as the officially given "total" for "international bodies" and "UK bodies".

Indeed, both terms are ambiguous because originally UK "Bodies" might have strong links outside of the UK, such as the aforementioned DRA. Subsequently, it is not entirely clear if the tests were for the country's official "national programme" or third parties.

¹¹ http://www.ukad.org.uk/?org_type=1&sport=0&submit=Submit&content=links (Last visited 30 November 2010)

As a result of this ambiguity it might be unwise to use the detailed breakdown of statistics (when attempting just to use “UK bodies”) if it is not exactly clear whether controls conducted per sport were by international federations or as part of a national programme. Indeed, as previously stated, it is not clear if “UK bodies” constitutes the tests conducted for a “national testing programme”, such as those of other NADOs which clearly divide “national testing programme” and “third party” results. Instead, to make use of these statistics, we will use data from both UK bodies and International bodies.

6. Variation of Reporting Practices in key areas

There is a lack of a standard for reporting on many of the key elements necessary for the analysis of anti doping practices. This section will compare the reporting practices of the NADOs with available annual reports. The results of this section will provide the basis for the analysis of the available data in Section 4 of this report.

a. Violations

Violations <i>Does the report state...</i>			
Table 1 Comparison of Report Contents Available annual reports or online statistical summaries of 2009	Total number of violations?	Violations per sport? (including refusals)	Whether the Violations occurred in or out of competition?
Belgium (Flemish)	Yes ¹²	Yes	Yes
Belgium (French)	Yes	Yes	NS
Czech Republic	Yes	Yes	NS
Denmark	Yes	Yes	NS
Finland	Yes	Yes	NS
France	Y/N* ¹³	Y/N*	NS
Germany	Yes	Yes	Yes
Ireland	Yes	Yes	Yes
Latvia	Yes	Yes	NS
Luxembourg	Y/N	Yes	Yes
Netherlands	Yes	Yes	NS
Norway	Yes	Yes	NS
Poland	Yes	Yes	Yes
Portugal	Yes	Yes	NS
Romania	Yes	NS	Yes
Serbia	Yes	Yes	Yes
Slovakia	Yes	Yes	Yes
Sweden	Y/N	Yes	NS
Switzerland	Yes	Yes	NS
United Kingdom	Yes	Yes	Yes
TOTALS	17	18	9

Total number of violations: 17 of 20 NADOs report the total number of violations.

¹² The Flemish Belgian NADO states a number of “doping practices” - we can assume this means “players caught doping”

^{13*} France lists “Abnormal Results” (and per sport) rather than violations – as of the 224 “Abnormal results” listed, 38 were given TUEs

Violations per sport: 18 of 20 NADOs report the number of violations per sport.

Violations, in or out of competition: 9 of 20 NADOs report whether the violations occurred in or out of competition.

Use of the word “positive”

Indeed, the French report and Swedish summary of statistics for 2009 differ so greatly from other reports in Europe, mostly due to the fact that neither provides much usable data, that they cannot be used in the comparative analysis.

The French Belgian, Danish and Luxembourgish reports list the number of “positive” cases. This causes confusion as we were trying to look for confirmed violations. “Positive cases” could include atypical findings as well as cases later granted a TUE.

Upon further inquiry, the **Danish** NADO stated that the number of “positives” were sanctioned so we could consider their results to mean confirmed violations.

The **French-Belgian** NADO added “Atypical Results” to its table in 2010 while keeping the term “positive” which means that we can reasonably assume that “positive” means confirmed violation.

Luxembourg’s “positive” is vague while the results table implies that the 3 positives were all violations but there is no guarantee this was the case. A press release from 2010 implies that “positive” means violation as they identified the sport, date and nationality of the athlete involved.

b. Substances

Substances <i>Does the report state...</i>				
Table 1 Comparison of Report Contents Available annual reports or online statistical summaries of 2009	Total number of substances found?	States the type of substances found?	Substances per sport and/or athlete?	Substance found in or out of competition?
Belgium (Flemish)	Yes	Yes	NS	Yes
Belgium (French)	Yes	Yes	NS	NS
Czech Republic	Yes	Yes	Yes	Yes
Denmark	NS	NS	NS	NS
Finland	Yes	Yes	Yes	NS
France	Yes	Yes	Y/N*	NS
Germany	Yes	Yes	Yes	Yes
Ireland	Yes	Yes	Yes	Yes
Latvia	NS	NS	NS	NS
Luxembourg	NS	NS	NS	NS
Netherlands	Yes	Yes	Yes	NS
Norway	Yes	Yes	Yes	NS
Poland	Yes	Yes	Yes	Yes
Portugal	NS	Yes	NS	NS
Romania	Yes	Yes	Yes	Yes
Serbia	Y/N ¹⁴			Yes
Slovakia	Yes	Yes	Yes	Yes
Sweden	NS	NS	NS	NS
Switzerland	Yes	Yes	Yes	NS
United Kingdom	Yes	Yes	Yes	Yes
<i>Totals "Yes" =</i>	14	15	11	9

Total number of substances found: 14 of 20 NADOs report the total number of substances found.

Type of substance found: 15 of 20 NADOs report the type of substances found.

The substances found per sport or athlete: 11 of 20 NADOs report the substances found per sport or athlete.

Substances found in or out of competition: 9 of 20 NADOs report whether the substance was found in or out of competition.

¹⁴ Names of substances found were available elsewhere on the Serbian NADO's website – not in the NADO report

c. Positives (Adverse Analytical Findings- AAFs)

BEL (FLEMISH)	BEL (FRENCH)	CZE	DEN	FIN	FRA	DEU	IRD	LVA	LUX	NLD
NS	NS	NS	NS	NS	YES	?	YES	NS	NS	YES

NOR	POL	POR	ROM	SRB	SVK	SWE	SZD	GBR
Y/N	NS	NS	NS	NS	NS	NS	NS	YES

Four (4) NADOs report the number of Adverse Analytical Findings.

d. Therapeutic Use Exemptions

BEL (FLEMISH)	BEL (FRENCH)	CZE	DEN	FIN	FRA	DEU	IRD	LVA	LUX	NLD
NS	NS	NS	NS	NS	YES	YES	YES	NS	NS	YES

NOR	POL	POR	ROM	SRB	SVK	SWE	SZD	GBR
YES	YES	YES	NS	Y/N	NS	NS	NS	YES

Eight (8) NADOs report the number of Therapeutic Use Exemptions (TUEs).

e. Missed tests

BEL (FLEMISH)	BEL (FRENCH)	CZE	DEN	FIN	FRA	DEU	IRD	LVA	LUX	NLD
NS	NS	NS	NS	NS	?	YES	YES	NS	NS	NS

NOR	POL	POR	ROM	SRB	SVK	SWE	SZD	GBR
Y/N	NS	?	NS	NS	NS	NS	YES	Y/N*

Two NADOs (2) report the number of missed tests.

f. Reporting failures

BEL (FLEMISH)	BEL (FRENCH)	CZE	DEN	FIN	FRA	DEU	IRD	LVA	LUX	NLD
NS	NS	NS	NS	NS	NS	YES	YES	NS	NS	NS

NOR	POL	POR	ROM	SRB	SVK	SWE	SZD	GBR
NS	NS	NS	NS	NS	NS	NS	?	Y/N*

Two NADOs (2) report the number of reporting failures.

*In Switzerland, there were no “whereabouts failures” in 2009

*The U.K. lists whereabouts failures without identifying what kind.

Notable Cases

Portugal – The report claims there was 1 violation in Kickboxing involving “Tentativa de evasão” (Attempted Evasion). This could be a Whereabouts failure rather than a refusal.

Norway – Lists the number of “antall advarsler” (number of warnings) for that year. This could include the number of Missed Tests and other findings. There was also one “meldeplikten” violation – for which the athlete was acquitted.

Section 2: Analysis of the Available Data

Data Sample: In the previous section, the contents of the 20 available NADO reports were compared and 17 were found to contain adequate data for analysis. These 17 reports from the NADOs of Belgium (Flemish), Belgium (French), Czech Republic, Denmark, Finland, Germany, Ireland, Latvia, Luxembourg, Netherlands, Norway, Poland, Romania, Serbia, Slovakia, Switzerland and the United Kingdom provide the data sample for this section of the report. Where data is missing in these individual reports, the data set will be narrowed for individual categories.

1. Testing

A note on testing: Samples vs. tests - the WADA annual report “Laboratory Statistics” describes the number of samples rather than number of tested athletes – sometimes more than one sample is taken from a single athlete.

a. Total Number of Reported Tests

	Total N° of tests / doping controls conducted by/for NADO
Belgium (Flemish)	2147
Belgium (French)	1487
Czech Republic	1410
Denmark	1665
Finland	1810
Germany	14286
Ireland	829
Latvia	156 ¹⁵
Luxembourg	191
Netherlands	2630
Norway	2835
Poland	2644
Romania	3030
Serbia	69 ¹⁶
Slovakia	818
Switzerland	1479
United Kingdom	7258
TOTALS =	44,744
<i>Totals not inc. BEL (fr.), DK, LV</i>	41,436

Seventeen (17) NADOs report the **total** number of tests.

¹⁵ Latvia conducted 219 tests – 63 were upon the request of International Federations

¹⁶ This figure does not include the 27 tests conducted on Horses; it is not clear how many violations there were in 2009. They will not be included in Serbia's figures.

b. Number of tests in and out-of-competition

	Number of tests in competition	Number of tests out of competition		Number of tests - unspecified whether IC /OC
Belgium (Flemish)	1539	608		-
Belgium (French)	NS	NS		-
Czech Republic	1065	345		-
Denmark	NS	NS		-
Finland	902	908		-
Germany	4878¹⁷	9040		368
Ireland	346	483		-
Latvia	Unknown	Unknown		-
Luxembourg	132	59		-
Netherlands	1855	775		-
Norway	1247	1588		-
Poland	1383	1261		-
Romania	1764	1266		-
Serbia	49	20		-
Slovakia	631	187		-
Switzerland	554	925		-
United Kingdom	3016	4242		
TOTALS =	19361	21707		368
<i>Totals not inc. BEL (fr.), DK, LV</i>	<i>19,361</i>	<i>21,707</i>		<i>368</i>

Fourteen (14) NADOs reported the number of tests conducted in and out of competition.

Analysis:

In 2009, of a total of **41,436** tests were conducted.

19,361 were in-competition , **21,707** out-of-competition and 368 were unidentified

There are some striking differences to be seen in the above table.

The ratio of in-competition tests to one out of competition test ranged widely from 3.37 to 1 in Slovakia to .53 to 1 in Germany.

The average of the all countries, excluding Germany was 1.14 in-competition tests for every 1 out-of-competition test.

Notes:

The table above excludes statistics from Denmark, French Belgium and Latvia because none of these NADOs show in their annual statistical summaries how many tests were conducted in total both in and out-of-competition

For the remainder of this section, the 368 test that were not identified as either in or out of competition will not be included in any analysis.

¹⁷ See "Individual Cases" on the Germany below

Other violations *may* have been confirmed since the writing of some of these annual reports – such as Germany’s and the Netherlands’ that listed “ongoing cases” at the time of publication.

As highlighted earlier, it is possible to surmise whether a violation occurred **in**-competition based on the substance discovered. However, we cannot work out if other violations occurred **out**-of-competition, as all substances banned out-of-competition are also banned in-competition according to the 2009 Prohibited Substances list. Thus, for a more accurate general comparison, the following calculations include only data from NADOs that clearly stated whether or not a violation occurred in or out-of-competition.

2. Violations

a. Total number of reported violations

<i>Total Number of violations discovered per NADO</i>	N° of violations reported
Belgium (Flemish)	116
Belgium (French)	91
Czech Republic	29
Denmark	14
Finland	6
Germany	27 ¹⁸
Ireland	3
Latvia	1
Luxembourg	3
Netherlands	14 ¹⁹
Norway	16
Poland	37
Romania	33
Serbia	2
Slovakia	7
Switzerland	24
United Kingdom	22
TOTALS =	445
<i>Totals not inc. BEL (fr.), DK, LV</i>	339

Analysis – total number of violations

44,744 total tests resulted in 445 violations.

- Of the 44,744 tests conducted, there were 445 violations in total. This means that **only 1.0%** of all tests in Europe yielded a violation.
- In this respect, as a European average it takes 100.6 tests to uncover **one** violation.

¹⁸ See “Individual Cases” on the Germany below

¹⁹ See “Individual Cases” on the Netherlands below

i. Interesting Individual Cases

Belgium

It should be noted that Flemish Belgium is somewhat of an outlier in Europe

- The NADO recoded 64 **bodybuilding** violations, approximately 53% of the total 121 violations which occurred in bodybuilding throughout Europe 2009. Nevertheless, excluding the Flemish figures, bodybuilding would still be ranked first in terms of total violations in Europe.
- The NADO also recorded the most **cycling** (all types) violations of any NADO, a total of 18, approximately 55% of the total 33 violations which occurred in cycling throughout Europe in 2009. Excluding the Flemish figures, cycling would only have 15 violations which would move it from second to fifth place in total violations in a particular sport. This is moderately high, still in the top five, but leaving a six point gap between it and Powerlifting & Weightlifting.

Lastly, of the 445 violations studied here, 116 violations – or 26 % – were uncovered in Flemish Belgium alone. This fact merits further inquiry.

Germany

First, the figure of 27 involves the number of confirmed violations for which the athletes have been warned or punished (two athletes were “internationals”).

1. By contrast, there were 5 German athletes at the time this report was made who tested positive for a prohibited substance but whose cases were still being investigated at the time.
2. Four potential violations were by international athletes and were sent on to the IFs.

Unfortunately, **unless we can be sure that violations have been committed**, they cannot be included in the total number of violations. The reader must bear this fact in mind when looking at Germany’s statistics because the actual figure of confirmed violations could be higher once the results are released.

All the figures can be found on page 49-50 of the 2009 Jahresbericht.

Second, nine violations were committed in Olympic sports. A further six violations occurred under the “*Deutsche Behindertensportverband*”, or the German “National Paralympic Committee”. The Jahresbericht does not specify the sport so we can assume that it was in a Olympic/Paralympics recognized sport.

Third, there were 368 tests listed as having been conducted on behalf of third parties. The report does not state if these were in or out-of-competition tests.

Fourth, of the 4878 in-competition tests, only 408 in-competition tests were conducted by Germany’s NADO. The rest were conducted on behalf of the German NADO. We **can include** these results in the German NADO’s “In-competition” tests total.

Netherlands

First, the Netherlands does not give an up-to-date list of “violations”. Instead, it lists the number of Adverse Analytical Findings in all of its 2630 tests of which there were 30 potential violations. From the table displayed on page 32 of their report, there are 9 cases where punishments or warnings were issued, 5 cases in which Dutch Sports Law Institute deemed the findings “inadmissible” (presumably meaning a violation occurred) and 14 other cases were either still “pending” or the proceedings have been instituted with the NADO, IF or Sports Organisations that ordered them. In the absence of a more precise and up-to-date list, **as in Germany’s case**, we have no choice but to work with the figure of 14 violations for this report. It must be kept in mind that the actual figure for violations is almost certainly higher several months after this report was published.

Second, the number of in and out-of-competitions tests were figures acquired from a chart on page 24 of the Netherlands Anti-Doping Report for 2009 that breaks down the number of tests per sport. If we add all the figures stated on the chart, we arrive at 2630 tests conducted in total. However, the NADO states on page 29 that the total number of tests was 2636 – which is a six test difference.

As we will be breaking selected sports down by in and out-of-competition testing, the figure of 2360 will be used instead of 2636.

Other Individual Cases

- **Luxembourg**: six tests on foreigners were conducted in-competition for the “FSGP Général Patton” – an undefined sports category.
- **United Kingdom**: UK Sport’s list of athletes found to be in violation of the Code in any particular area is not mentioned on the quarterly reports. Instead the quarterly reports show the number of athletes who have been confirmed as violators since the last update(s). The complete list of violations is easily accessible on the UK Sport’s Website.²⁰

²⁰ <http://www.ukad.org.uk/violations/> (last visited 30 November 2010)

b. Sports in Which Violations occurred in 2009

First, nearly all the violations which occurred in 2009, according to the data provided in the reports and statistical summaries of the aforementioned 17 NADOs, occurred in no less than **64 sports or sports categories** in 2009.

The list below displays **58** recognised sports or sports categories and **six “general” sports** categories used by some NADOs which may include one or more sports, including some of those listed below.

The Olympic / Paralympic Sports are highlighted in **Bold**;

Aïkido, Bodybuilding, **Football**, Kickboxing, Shooto, **Tennis**, American Football, **Boxing**, Futsal, Mountaineering, **Skiing**, **Triathlon**, **Archery**, **Canoe & Kayak**, **Gymnastics**, Motorcycle, Sport Climbing, **Volleyball**, **Athletics**, Cricket, **Handball**, Military Sports, **Squash**, **Water polo**, Automobile (FIA), **Cycling**, **Hockey**, Boules & Pétanque, Strongman, **Weightlifting**, **Badminton**, Duathlon, Hornuss, Powerlifting, Street Hockey, **Wheelchair Basketball**, **Basketball**, **Equestrian**, **Ice Hockey**, **Rugby**, Sumo, **Wrestling**, Baseball & Softball, Eisstock, **Ice Skating**, **Sailing**, **Swimming**, Wushu Billiards & Related, Floor ball, **Judo**, Savate, **Taekwondo**, **Bobsleigh**, Fitness, Karate, **Shooting**, **Table Tennis**

The general sports categories are; Bobsleigh & Athletics, Disability / Paralympic Sport, Martial Arts, Motorsports, Strength Sports, and Water sports.

Bob & Athletics is a Swiss category, “Behindertensportverband” is a category, “Martial Arts” is a Norwegian Category, “Strength Sports” is a Dutch category, “Sports Nautiques” (watersports) is a category used by French Belgium and “Motorsports” is used by Germany, Ireland and Norway.

c. Number of violations per sport

There were 58 sports with violations in 2009.

One (1) violation:	Aïkido, Archery, Climbing Sport, Cricket, Duathlon, Eisstock, Hornuss, Military Sport, Pétanque, Sailing, Savate, Skiing, Strongman, Sumo, Taekwondo, Tennis, Wushu
Two (2) violations:	Autosport, Badminton, Bobsleigh, Canoe, Equestrian, Floorball, Karate, Shooting, Squash, Swimming, Wheelchair Basketball
Three (3) violations:	Gymnastics, Ice Skating, Judo, Mountaineering, Shooto, Street Hockey, Table Tennis
Four (4) violations:	Athletics, Billiards, Water polo
Five (5) violations:	Baseball, Handball, Hockey, Motorcycle
More than Five (5):	Triathlon (6) , Volleyball (6) , Wrestling (7) , American Football (8) , Fitness (8) , Football (11) , Ice Hockey (11) , Boxing (12) , Futsal (12) , Basketball (14) , Kickboxing (14) , Powerlifting (21) , Weightlifting (21) , Rugby (25) , Cycling (33) , Bodybuilding (121)

d. Analysis – Number of Violations per Sport

From the statistics presented in this section, it is clear that not only do the majority of violations appear to occur *in-competition* but that particular sports are much more prone to violations than others.

11 out of 64 (including 6 general categories) sports accounted of 66.9% of all violations.

17 out of 64 sports had only one confirmed violations. Those 17 sports accounted for only 3.8% of all violations.

42 out of 64 sports accounted for only 20% of all violations.

Five sports accounted for 49.7% of all violations.

Powerlifting	21 violations	(4.7%)
Weightlifting	21violations	(4.7%)
Rugby (union and league combined)	25 violations	(5.6%)
Cycling	33 violations	(7.4 %)
Bodybuilding	121 violations	(27.2%) of all violations

e. Breakdown of Violations by Sport

This subsection lists all available data regarding individual violations that occurred in a particular sport gathered from 17 NADO reports. This section offers breakdown (by tests and type of violation) of individual sports in which violations were seen to have occurred in 2009.

We have been able to identify general patterns of testing and violations per sport and NADO in previous subsections, however this subsection offers a detailed breakdown of each sport by results available per NADO. We can therefore see in which country the most violations or a certain type, whether in or out of competition, occurred per sport.

What this section also shows perhaps better than the previous sections of the report is the effects of the chaotic state of anti-doping reporting, for much data is missing and only a blank space could be shown.

Results featured;

French Belgium, Flemish Belgium, Czech Republic, Denmark, Finland, Germany, Ireland, Latvia, Luxembourg, Netherlands, Norway, Poland, Romania, Serbia, Slovakia, Switzerland and United Kingdom

Violations: There were 445 in total

Table Description

The tables are divided into three subsections

The first subsection displays information available for Olympic Sports in which **more than one** NADO recoded a violation in that particular sport.

The second subsection displays information available for Other Sports in which **more than one** NADO recoded a violation in that particular sport.

The third subsection displays information available for the remaining sports in which **only one** NADO recoded a violation in that particular sport.

For those sports in which **more than one** violation occurred, the data is displayed in two tables.

The **first** of the two tables lists the number of tests carried out by each NADO and number of violations discovered in and out of competition.

The **second** of the two tables shows which type of violation occurred.

Below the second of the two tables are shown a list of the “multiple violations” or “unspecified” violations if any occurred in that sport.

For those sports in which **only one** violation occurred, they will all be arranged in the same two table format as described above.

Key

Red highlight shows the NADOs for whom the statistics gauged from the annual reports may be incomplete for 2009 or they include both National and Third Party Testing programme data.

Bold highlight indicates the Sport is currently played in the Summer or Winter Olympic Games.

*

SUMMER & WINTER OLYMPIC SPORTS

*

Athletics							
NADO	Total tests on Sport	Tests IC	Tests OC	Total Violations	Violations IC	Violations OC	Violations unspecified
French Belgium	66	-	-	1	-	-	1
Luxembourg	33	21	12	1	-	-	1
Romania	-	-	-	1	0	1	0
Switzerland	139	31	48	1	-	-	1

Athletics	Anabolic Agents	Hormones & related	Beta-2 Antagonists	Masking Agents	Stimulants	Cannabinoids	Glucosteroids	(if relevant) Beta Blockers	T/E	Refusal	Manipulation	Unspecified	Multiple Violations	Totals
French Belg.	0	0	0	0	1	0	0	0	0	0	0	0	0	1
Luxembourg	-	-	-	-	-	-	-	-	-	-	-	1	-	1
Romania	1	0	0	0	0	0	0	0	0	0	0	0	0	1
Switzerland	1	0	0	0	0	0	0	0	0	0	0	0	0	1
Totals	2	-	-	-	1	-	-	-	-	-	-	1	-	4

- **Luxembourg** – Athletics – In Competition – 1 positive

Boxing							
NADO	Total tests on Sport	Tests IC	Tests OC	Total Violations	Violations IC	Violations OC	Violations unspecified
Czech Republic	20	13	7	1	1	0	0
Denmark	-	-	-	1	-	-	1
Flemish Belg.	50	47	3	1	1	0	1
French Belg.	55	-	-	5	2	-	3
Poland	107	-	-	1	1	0	0
Switzerland	16	1	7	2	1	-	1
U.K.	194	161	33	1	1	0	0

<i>Boxing</i>	Anabolic Agents	Hormones & related	Beta-2 Antagonists	Masking Agents	Stimulants	Cannabinoids	Glucosteroids	(if relevant) Beta Blockers	T/E	Refusal	Manipulation	Unspecified	Multiple Violations	Totals
Czech Republic	1	0	0	0	0	0	0	0	0	0	0	0	0	1
Denmark	-	-	-	-	-	-	-	-	-	-	-	1	-	1
Flemish Belg.	0	0	0	0	0	1	0	0	0	0	0	0	0	1
French Belg.	0	0	0	0	1	2	0	0	0	2	0	0	0	5
Poland	1	0	0	0	0	0	0	0	0	0	0	0	0	1
Switzerland	0	0	0	0	0	1	0	0	0	1	0	0	0	2
U.K.	0	0	0	1	0	0	0	0	0	0	0	0	0	1
Totals	2	-	-	1	1	4	-	-	-	3	-	1	-	12

- **Denmark** – Boxing – (?) – 1 positive

Basketball							
NADO	Total tests on Sport	Tests IC	Tests OC	Total Violations	Violations IC	Violations OC	Violations unspecified
French Belgium	92	-	-	4	1	-	3
Germany	-	-	243	1	1	0	0
Netherlands	152	123	29	3	2	-	1
Poland	156	-	-	2	2	0	0
Switzerland	20	16	4	1	1	0	0
U.K.	97	88	9	3	3	0	0

<i>Basketball</i>	Anabolic Agents	Hormones & related	Beta-2 Antagonists	Masking Agents	Stimulants	Cannabinoids	Glucosteroids	(If relevant) Beta Blockers	T/E	Refusal	Manipulation	Unspecified	Multiple Violations	Totals
French Belg.	1	0	1	1	0	1	0	0	0	0	0	0	0	4
Germany	0	0	0	0	0	1	0	0	0	0	0	0	0	1
Netherlands	0	0	0	0	0	2	0	0	0	1	0	0	0	3
Poland	0	0	0	0	0	2	0	0	0	0	0	0	0	2
Switzerland	0	0	0	0	0	1	0	0	0	0	0	0	0	1
U.K.	0	0	0	0	0	3	0	0	0	0	0	0	0	3
Totals	1	-	1	1	-	10	-	-	-	1	-	-	-	14

Comments

- As in other tables, the vast majority of the violations are occurring in competition
- Cannabinoids are the most frequently used substance in Basket Ball, at 71% of all violations
- Cannabinoid use is spread equally across all 6 NADOs

Canoe / Kayak							
NADO	Total tests on Sport	Tests IC	Tests OC	Total Violations	Violations IC	Violations OC	Violations unspecified
Serbia	4	4	0	1	1	0	0
U.K.	53	22	31	1	1	0	0

<i>Canoe</i>	Anabolic Agents	Hormones & related	Beta-2 Antagonists	Masking Agents	Stimulants	Cannabinoids	Glucosteroids	(If relevant) Beta Blockers	T/E	Refusal	Manipulation	Unspecified	Multiple Violations	Totals
Serbia	0	0	0	0	0	0	1	0	0	0	0	0	0	1
U.K.	1	0	0	0	0	0	0	0	0	0	0	0	0	1
Totals	1	-	-	-	-	-	1	-	-	-	-	-	-	2

Cycling							
NADO	Total tests on Sport	Tests IC	Tests OC	Total Violations	Violations IC	Violations OC	Violations unspecified
French Belg.	238	-	-	3	-	-	3
Flemish Belg.	677	449	228	19	18	1	0
Finland	24	-	-	2	-	-	2
Germany	-	-	701	3	2	1	0
Latvia	-	-	-	-	-	-	1
Luxembourg	53	45	8	1	1	0	0
Poland	112	-	-	2	2	0	0

Cycling	Anabolic Agents	Hormones & related	Beta-2 Antagonists	Masking Agents	Stimulants	Cannabinoids	Glucosteroids	(If relevant) Beta Blockers	T/E	Refusal	Manipulation	Unspecified	Multiple Violations	Totals
French Belg.	0	1	1	0	0	0	0	0	0	1	0	0	0	3
Flemish Belg.	2	1	7	0	5	1	0	0	0	3	0	0	0	19
Finland	2	0	0	0	0	0	0	0	0	0	0	0	0	2
Germany	0	1	0	0	0	2	0	0	0	0	0	0	0	3
Latvia	0	0	0	0	0	0	0	0	1	0	0	0	0	1
Luxembourg	-	-	-	-	-	-	-	-	-	-	-	1	-	1
Poland	0	0	0	0	1	0	1	0	0	0	0	0	0	2
Totals	4	3	8	-	6	3	1	-	1	4	-	1	-	31

- **Luxembourg** – Cycling – In Competition – 1 “positive”

Comments

- Cycling has the greatest spread of violations by type
- Stimulants and Beta-2 Antagonists are the most frequently used substances
- *It must be remembered that it was in Flemish Belgium where 60% of the cycling violations occurred

Equestrian								
NADO	Total tests on Sport	Tests IC	Tests OC		Total Violations	Violations IC	Violations OC	Violations unspecified
Norway	-	-	-		1	1	0	0
Romania	-	-	-		1	1	0	0

Equestrian	Anabolic Agents	Hormones & related	Beta-2 Antagonists	Masking Agents	Stimulants	Cannabinoids	Glucosteroids	Beta Blockers	T/E	Refusal	Manipulation	Unspecified	Multiple Violations	Totals
Norway	0	0	0	0	1	0	0	0	0	0	0	0	0	1
Romania	0	0	0	0	0	1	0	0	0	0	0	0	0	1
Totals	-	-	-	-	1	1	-	-	-	-	-	-	-	2

Football								
NADO	Total tests on Sport	Tests IC	Tests OC		Total Violations	Violations IC	Violations OC	Violations unspecified
Flemish Belg.	92	12	80		1	1	0	0
Germany	-	-	504		1	1	0	0
Ireland	59	32	27		1	1	0	0
Norway	189	-	-		2	-	-	2
Switzerland	48	8	40		1	1	0	0
U.K.	1747	560	1187		5	1	4	0

<i>Football</i>	Anabolic Agents	Hormones & related	Beta-2 Antagonists	Masking Agents	Stimulants	Cannabinoids	Glucosteroids	Beta Blockers	T/E	Refusal	Manipulation	Unspecified	Multiple Violations	Totals
Flemish Belg.	0	0	0	0	0	1	0	0	0	0	0	0	0	1
Germany	1	0	0	0	0	0	0	0	0	0	0	0	0	1
Ireland	0	0	0	0	0	1	0	0	0	0	0	0	0	1
Norway	0	0	0	0	0	0	0	0	0	1	0	0	1	2
Switzerland	0	0	0	0	1	0	0	0	0	0	0	0	0	1
U.K.	0	0	0	0	4	1	0	0	0	0	0	0	0	5
Totals	1	-	-	-	5	3	-	-	-	1	-	-	1	11

- **Norway** –Football – (?) – 1 Anabolic Agent & 1 Hormones

Comments

- It appears that recreational drugs are the most frequently used drugs in association football – Cannabinoids and Cocaine.

Gymnastics							
NADO	Total tests on Sport	Tests IC	Tests OC	Total Violations	Violations IC	Violations OC	Violations unspecified
Flemish Belg.	34	18	16	1	1	0	0
Netherlands	37	15	22	1	1	0	0
Switzerland	48	15	33	1	1	0	0

<i>Gymnastics</i>	Anabolic Agents	Hormones & related	Beta-2 Antagonists	Masking Agents	Stimulants	Cannabinoids	Glucosteroids	Beta Blockers	T/E	Refusal	Manipulation	Unspecified	Multiple Violations	Totals
Flemish Belg.	0	0	0	0	0	1	0	0	0	0	0	0	0	1
Netherlands	0	0	0	0	1	0	0	0	0	0	0	0	0	1
Switzerland	0	0	0	0	1	0	0	0	0	0	0	0	0	1
Totals	-	-	-	-	2	1	-	-	-	-	-	-	-	3

Handball								
NADO	Total tests on Sport	Tests IC	Tests OC		Total Violations	Violations IC	Violations OC	Violations unspecified
Czech Rep.	53	47	6		1	1	0	0
Flemish Belg.	18	18	0		1	1	0	0
French Belg.	52	-	-		2	1	-	1
Germany	-	-	270		1	1	0	0

Handball	Anabolic Agents	Hormones & related	Beta-2 Antagonists	Masking Agents	Stimulants	Cannabinoids	Glucosteroids	Beta Blockers	T/E	Refusal	Manipulation	Unspecified	Multiple Violations	Totals
Czech Rep.	0	0	0	0	1	0	0	0	0	0	0	0	0	1
Flemish Belg.	0	0	0	0	0	1	0	0	0	0	0	0	0	1
French Belg.	0	0	0	1	0	1	0	0	0	0	0	0	0	2
Germany	0	0	0	0	1	0	0	0	0	0	0	0	0	1
Totals	-	-	-	1	2	2	-	-	-	-	-	-	-	5

Hockey								
NADO	Total tests on Sport	Tests IC	Tests OC		Total Violations	Violations IC	Violations OC	Violations unspecified
Flemish Belg.	6	6	0		1	1	0	0
French Belg.	62	-	-		3	1	-	2
Netherlands	106	76	30		1	1	0	0

<i>Hockey</i>	Anabolic Agents	Hormones & related	Beta-2 Antagonists	Masking Agents	Stimulants	Cannabinoids	Glucosteroids	Beta Blockers	T/E	Refusal	Manipulation	Unspecified	Multiple Violations	Totals
Flemish Belg.	0	0	0	0	0	1	0	0	0	0	0	0	0	1
French Belg.	0	0	2	0	0	1	0	0	0	0	0	0	0	3
Netherlands	0	0	0	0	0	1	0	0	0	0	0	0	0	1
Totals	-	-	2	-	-	3	-	-	-	-	-	-	-	5

Ice Hockey							
NADO	Total tests on Sport	Tests IC	Tests OC	Total Violations	Violations IC	Violations OC	Violations unspecified
Czech Rep	63	55	8	1	1	0	0
French Belg.	12	-	-	1	-	-	1
Norway	126	-	-	2	1	-	1
Poland	122	-	-	2	2	0	0
Romania	-	-	-	4	4	0	0
Switzerland	102	28	74	1	1	0	0

<i>Ice Hockey</i>	Anabolic Agents	Hormones & related	Beta-2 Antagonists	Masking Agents	Stimulants	Cannabinoids	Glucosteroids	Beta Blockers	T/E	Refusal	Manipulation	Unspecified	Multiple Violations	Totals
Czech Rep	0	0	0	0	0	0	1	0	0	0	0	0	0	1
French Belg.	0	0	0	0	1	0	0	0	0	0	0	0	0	1
Norway	1	0	0	0	0	1	0	0	0	0	0	0	0	2
Poland	0	0	0	0	0	2	0	0	0	0	0	0	0	2
Romania	1	0	0	0	1	2	0	0	0	0	0	0	0	4
Switzerland	0	0	0	0	0	1	0	0	0	0	0	0	0	1
Totals	2	-	-	-	2	6	1	-	-	-	-	-	-	11

Comments

- Cannabinoid detection forms half of the violations for Ice Hockey

Ice Skating								
NADO	Total tests on Sport	Tests IC	Tests OC		Total Violations	Violations IC	Violations OC	Violations unspecified
Germany	-	-	413		1	1	0	0
Netherlands	249	188	61		1	-	-	1
Poland	43	-	-		1	1	0	0

Ice Skating	Anabolic Agents	Hormones & related	Beta-2 Antagonists	Masking Agents	Stimulants	Cannabinoids	Glucosteroids	Beta Blockers	T/E	Refusal	Manipulation	Unspecified	Multiple Violations	Totals
Germany	-	-	-	-	-	-	-	-	-	-	-	1	-	1
Netherlands	1	0	0	0	0	0	0	0	0	0	0	0	0	1
Poland	0	0	0	0	0	1	0	0	0	0	0	0	0	1
Totals	1	-	-	-	-	1	-	-	-	-	-	1	-	3

- Germany – Ice Skating – In Competition – “use” (code art.2.2)

Judo								
NADO	Total tests on Sport	Tests IC	Tests OC		Total Violations	Violations IC	Violations OC	Violations unspecified
Flemish Belg.	26	18	8		1	1	0	0
French Belg.	26	-	-		2	2	0	0

Judo	Anabolic Agents	Hormones & related	Beta-2 Antagonists	Masking Agents	Stimulants	Cannabinoids	Glucosteroids	Beta Blockers	T/E	Refusal	Manipulation	Unspecified	Multiple Violations	Totals
Flemish Belg.	0	0	0	0	1	0	0	0	0	0	0	0	0	1
French Belg.	0	0	0	0	0	2	0	0	0	0	0	0	0	2
Totals	-	-	-	-	1	2	-	-	-	-	-	-	-	3

Shooting								
NADO	Total tests on Sport	Tests IC	Tests OC		Total Violations	Violations IC	Violations OC	Violations unspecified
French Belg.	20	-	-		1	-	-	1
Romania	-	-	-		1	-	-	1

Shooting	Anabolic Agents	Hormones & related	Beta-2 Antagonists	Masking Agents	Stimulants	Cannabinoids	Glucosteroids	Beta Blockers	T/E	Refusal	Manipulation	Unspecified	Multiple Violations	Totals
French Belg.	0	0	0	0	0	0	0	0	0	0	0	0	1	1
Romania	0	0	0	0	0	0	0	0	0	1	0	0	0	1
Totals	-	-	-	-	-	-	-	-	-	1	-	-	1	2

- **French** Belgium - Shooting - (?) - 3 Beta-2 Antagonists and 1 Masking Agent

Swimming								
NADO	Total tests on Sport	Tests IC	Tests OC		Total Violations	Violations IC	Violations OC	Violations unspecified
Czech Rep.	103	77	26		1	1	0	0
French Belg.	24	-	-		1	-	-	1

Swimming	Anabolic Agents	Hormones & related	Beta-2 Antagonists	Masking Agents	Stimulants	Cannabinoids	Glucosteroids	Beta Blockers	T/E	Refusal	Manipulation	Unspecified	Multiple Violations	Totals
Czech Rep.	1	0	0	0	0	0	0	0	0	0	0	0	0	1
French Belg.	0	0	0	1	0	0	0	0	0	0	0	0	0	1
Totals	1	-	-	1	-	-	-	-	-	-	-	-	-	2

Triathlon							
NADO	Total tests on Sport	Tests IC	Tests OC	Total Violations	Violations IC	Violations OC	Violations unspecified
Flemish Belg.	48	48	0	1	1	0	0
French Belg.	26	-	-	1	-	-	1
Czech Rep.	18	15	3	1	1	0	0
Germany	-	-	-	1	1	0	0
Slovakia	11	8	3	1	1	0	0
U.K.	108	44	64	1	1	0	0

Triathlon	Anabolic Agents	Hormones & related	Beta-2 Antagonists	Masking Agents	Stimulants	Cannabinoids	Glucosteroids	Beta Blockers	T/E	Refusal	Manipulation	Unspecified	Multiple Violations	Totals
Flemish Belg.	0	0	1	0	0	0	0	0	0	0	0	0	0	1
French Belg.	0	0	0	1	0	0	0	0	0	0	0	0	0	1
Czech Rep.	0	0	0	0	1	0	0	0	0	0	0	0	0	1
Germany	0	0	1	0	0	0	0	0	0	0	0	0	0	1
Slovakia	0	0	0	0	0	0	0	0	0	0	1	0	0	1
U.K.	0	0	0	0	1	0	0	0	0	0	0	0	0	1
Totals	-	-	2	1	2	-	-	-	-	-	1	-	-	6

Volleyball								
NADO	Total tests on Sport	Tests IC	Tests OC		Total Violations	Violations IC	Violations OC	Violations unspecified
French Belg.	103	-	-		2	-	-	2
Germany	-	-	-		1	1	0	0
Slovakia	35	35	0		3	3	0	0

Volleyball	Anabolic Agents	Hormones & related	Beta-2 Antagonists	Masking Agents	Stimulants	Cannabinoids	Glucosteroids	Beta Blockers	T/E	Refusal	Manipulation	Unspecified	Multiple Violations	Totals
French Belg.	0	0	0	0	0	0	0	0	0	0	0	2	0	2
Germany	0	0	0	0	0	1	0	0	0	0	0	0	0	1
Slovakia	0	0	0	0	0	1	0	0	0	2	0	0	0	3
Totals	-	-	-	-	-	2	-	-	-	2	-	2	-	6

- **French** Belgium – Volleyball – (?) – 2 doping cases (1 Narcotic & 1 Cannabinoid & 1 Beta-2 Antagonist)

Water Polo								
NADO	Total tests on Sport	Tests IC	Tests OC		Total Violations	Violations IC	Violations OC	Violations unspecified
Czech Rep.	8	8	0		1	1	0	0
French Belg.	8	0	0		2	-	-	2
Slovakia	20	20	0		1	1	0	0

<i>Water Polo</i>	Anabolic Agents	Hormones & related	Beta-2 Antagonists	Masking Agents	Stimulants	Cannabinoids	Glucosteroids	Beta Blockers	T/E	Refusal	Manipulation	Unspecified	Multiple Violations	Totals
Czech Rep.	0	0	0	0	0	1	0	0	0	0	0	0	0	1
French Belg.	0	0	0	0	1	0	0	0	0	1	0	0	0	2
Slovakia	0	0	0	1	0	0	0	0	0	0	0	0	0	1
Totals	-	-	-	1	1	1	-	-	-	1	-	-	-	4

Weightlifting							
NADO	Total tests on Sport	Tests IC	Tests OC	Total Violations	Violations IC	Violations OC	Violations unspecified
Czech Rep.	50	22	28	2	2	0	0
Denmark	59	-	-	7	-	-	7
French Belg.	13	-	-	3	2	-	1
Norway	46	-	-	1	1	0	0
Poland	180	-	-	2	1	1	0
Romania	-	-	-	6	6	0	0

<i>Weightlifting</i>	Anabolic Agents	Hormones & related	Beta-2 Antagonists	Masking Agents	Stimulants	Cannabinoids	Glucosteroids	Beta Blockers	T/E	Refusal	Manipulation	Unspecified	Multiple Violations	Totals
Czech Rep.	0	0	0	0	1	1	0	0	0	0	0	0	0	2
Denmark	-	-	-	-	-	-	-	-	-	-	-	7	-	7
French Belg.	0	0	0	0	1	2	0	0	0	0	0	0	0	3
Norway	0	0	0	0	0	1	0	0	0	0	0	0	0	1
Poland	1	0	0	0	1	0	0	0	0	0	0	0	0	2
Romania	6	0	0	0	0	0	0	0	0	0	0	0	0	6
Totals	7	-	-	-	3	4	-	-	-	-	-	7	-	21

- **Denmark** – Weightlifting – (?) – 7 “positives”

Wrestling								
NADO	Total tests on Sport	Tests IC	Tests OC		Total Violations	Violations IC	Violations OC	Violations unspecified
Germany	-	-	102		-	-	1	-
Poland	123	-	-		0	4	0	0
Romania	-	-	-		1	1	-	-
U.K.	22	18	4		1	1	-	-

Wrestling	Anabolic Agents	Hormones & related	Beta-2 Antagonists	Masking Agents	Stimulants	Cannabinoids	Glucosteroids	Beta Blockers	T/E	Refusal	Manipulation	Unspecified	Multiple Violations	Totals
Germany	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Poland	0	0	0	1	1	1	0	0	0	0	0	0	1	4
Romania	0	0	0	1	0	0	0	0	0	0	0	0	0	1
U.K.	1	0	0	0	0	0	0	0	0	0	0	0	0	1
Totals	1	-	-	2	1	1	-	-	-	-	-	-	1	7

- **Germany** – Wrestling – Out of Competition – “Possession” (code art. 2.6)
- **Poland** – Wrestling – In Competition – 2 Anabolic Agents & Cannabinoid

*

OTHER SPORTS

*

American Football								
NADO	Total tests on Sport	Tests IC	Tests OC		Total Violations	Violations IC	Violations OC	Violations unspecified
Denmark	64	-	-		1	-	-	1
Finland	68	-	-		2	2	0	0
Germany	-	-	136		1	1	0	0
Norway	44	-	-		2	2	0	0
Switzerland	20	8	12		2	2	0	0

American Football	Anabolic Agents	Hormones & related	Beta-2 Antagonists	Masking Agents	Stimulants	Cannabinoids	Glucosteroids	Beta Blockers	T/E	Refusal	Manipulation	Unspecified	Multiple Violations	Totals
Denmark	-	-	-	-	-	-	-	-	-	-	-	1	0	1
Finland	0	0	0	0	0	2	0	0	0	0	0	0	0	2
Germany	0	0	0	0	0	1	0	0	0	0	0	0	0	1
Norway	0	0	0	0	1	1	0	0	0	0	0	0	0	2
Switzerland	0	0	0	0	1	1	0	0	0	0	0	0	0	2
Totals	-	-	-	-	2	5	-	-	-	-	-	1	-	8

- **Denmark** – American Football – (?) – 1 positive

Autosport								
NADO	Total tests on Sport	Tests IC	Tests OC		Total Violations	Violations IC	Violations OC	Violations unspecified
Flemish Belg.	76	12	64		1	1	0	0
French Belg.	14	-	-		1	-	-	1

<i>Autosport</i>	Anabolic Agents	Hormones & related	Beta-2 Antagonists	Masking Agents	Stimulants	Cannabinoids	Glucosteroids	Beta Blockers	T/E	Refusal	Manipulation	Unspecified	Multiple Violations	Totals
Flemish Belg.	0	0	0	0	1	0	0	0	0	0	0	0	0	1
French Belg.	0	0	0	0	0	0	0	0	0	1	0	0	0	1
Totals	-	-	-	-	1	-	-	-	-	1	-	-	-	2

<u>Billiards</u>								
NADO	Total tests on Sport	Tests IC	Tests OC		Total Violations	Violations IC	Violations OC	Violations unspecified
Germany	-	-	-		1	1	0	0
Netherlands	32	32	0		1	1	0	0
Romania	-	-	-		1	1	0	0
Switzerland	3	3	0		1	-	-	1

<i>Billiards</i>	Anabolic Agents	Hormones & related	Beta-2 Antagonists	Masking Agents	Stimulants	Cannabinoids	Glucosteroids	Beta Blockers	T/E	Refusal	Manipulation	Unspecified	Multiple Violations	Totals
Germany	0	0	0	0	0	0	0	0	0	0	0	0	1	1
Netherlands	0	0	0	0	1	0	0	0	0	0	0	0	0	1
Romania	0	0	0	0	0	1	0	0	0	0	0	0	0	1
Switzerland	0	0	0	0	0	0	0	0	0	1	0	0	0	1
Totals	0	0	0	0	1	1	0	0	0	1	0	0	1	4

- **Germany** – Billiards – In Competition – 1 Stimulant & 1 Cannabinoid

Baseball							
NADO	Total tests on Sport	Tests IC	Tests OC	Total Violations	Violations IC	Violations OC	Violations unspecified
Flemish Belg.	18	18	0	1	1	0	0
French Belg.	25	-	-	3	1	-	2
Germany	-	-	90	1	1	0	0

Baseball	Anabolic Agents	Hormones & related	Beta-2 Antagonists	Masking Agents	Stimulants	Cannabinoids	Glucosteroids	Beta Blockers	T/E	Refusal	Manipulation	Unspecified	Multiple Violations	Totals
Flemish Belg.	0	0	0	0	0	0	0	0	0	0	0	0	1	1
French Belg.	0	1	0	0	1	1	0	0	0	0	0	0	0	3
Germany	0	0	0	0	1	0	0	0	0	0	0	0	0	1
Totals	0	1	0	0	2	1	0	0	0	0	0	0	1	5

- **Flemish** Belgium – Baseball – In Competition – 1 Stimulant & 1 Narcotics

Bodybuilding							
NADO	Total tests on Sport	Tests IC	Tests OC	Total Violations	Violations IC	Violations OC	Violations unspecified
Czech Rep.	47	32	15	16	1	-	15
Flemish Belg.	69	63	6	64	58	6	0
French Belg.	40	-	-	18	-	-	18
Poland	92	-	-	10	9	1	0
Romania	-	-	-	11	7	4	0
Serbia	2	0	2	1	1	0	0
Slovakia	45	29	16	1	1	0	0

<i>Bodybuilding</i>	Anabolic Agents	Hormones & related	Beta-2 Antagonists	Masking Agents	Stimulants	Cannabinoids	Glucosteroids	Beta Blockers	T/E	Refusal	Manipulation	Unspecified	Multiple Violations	Totals
Czech Rep.	3	0	0	0	1	0	0	0	2	1	1	0	8	16
Flemish Belg.	5	0	0	0	0	0	0	0	0	25	0	34	0	64
French Belg.	0	0	0	0	0	0	0	0	-	7	0	11	0	18
Poland	5	0	0	0	0	1	0	0	0	1	0	0	3	10
Romania	9	0	0	0	0	0	0	0	0	1	0	0	1	11
Serbia	1	0	0	0	0	0	0	0	0	0	0	0	0	1
Slovakia	0	0	0	0	0	0	0	0	0	1	0	0	0	1
Totals	23	-	-	-	1	1	-	-	2	36	1	45	12	121

Key

- "AA" Stands for "Anabolic Agent"
- **Czech** – Bodybuilding – (?) – 3 AA & T/E
- **Czech** – Bodybuilding – (?) – 3 AA & 1 Diuretic or Masking Agent
- **Czech** – Bodybuilding – (?) – 3 AA & 2 Diuretic or Masking Agents & T/E
- **Czech** – Bodybuilding – (?) – 3 AA & 2 Diuretic or Masking Agents & T/E
- **Czech** – Bodybuilding – (?) – 2 AA & T/E
- **Czech** – Bodybuilding – (?) – 1 AA & 1 Stimulant & 1 Cannabinoid
- **Czech** – Bodybuilding – (?) – 1 AA & 1 Diuretic or Masking Agent & T/E
- **Czech** – Bodybuilding – (?) – 4 AA & 2 Diuretic or Masking Agents & T/E
- **Flemish Belgium** – Bodybuilding – In Competition – **34 doping cases** (1 Cannabinoid, 33 Anabolic, 4 Diuretic & Masking)
- **French Belgium** – Bodybuilding – (?) – **11 doping cases** (3 stimulants, 1 Cannabinoid, 4 Anabolic Agents, 1 Beta-2 Antagonist, 7 Masking Agents)
- **Poland** – Body Building – In Competition – 2 AA & 1 Hormone Antagonist & Cannabinoid
- **Poland** – Body Building – In Competition – 1 Hormone Antagonist & 1 AA
- **Poland** – Body Building – In Competition – 1 Hormone Antagonist & 1 AA
- **Romania** – Bodybuilding – In Competition – 1 AA & 1 Diuretic or Masking Agent

Comments

- Bodybuilding has the highest number of violations in total, and the highest number of refusals and anabolic agent violations
- It is also interesting to note that Flemish Belgium is where a majority of these violations were reported

Floorball								
NADO	Total tests on Sport	Tests IC	Tests OC		Total Violations	Violations IC	Violations OC	Violations unspecified
Flemish Belg.	6	6	0		1	1	0	0
Denmark	189	-	-		1	0	0	1

Floorball	Anabolic Agents	Hormones & related	Beta-2 Antagonists	Masking Agents	Stimulants	Cannabinoids	Glucosteroids	Beta Blockers	T/E	Refusal	Manipulation	Unspecified	Multiple Violations	Totals
Flemish Belg.	0	0	1	0	0	0	0	0	0	0	0	0	0	1
Denmark	-	-	-	-	-	-	-	-	-	-	-	1	-	1
Totals	-	-	1	-	-	-	-	-	-	-	-	1	-	2

- **Denmark** - Football - (?) - 1 positive

Fitness								
NADO	Total tests on Sport	Tests IC	Tests OC		Total Violations	Violations IC	Violations OC	Violations unspecified
Flemish Belg.	18	0	18		5	0	5	0
Norway	-	-	-		1	-	-	1
Romania	-	-	-		1	1	0	0
Slovakia	20	12	8		1	1	0	0

<i>Fitness</i>	Anabolic Agents	Hormones & related	Beta-2 Antagonists	Masking Agents	Stimulants	Cannabinoids	Glucosteroids	Beta Blockers	T/E	Refusal	Manipulation	Unspecified	Multiple Violations	Totals
Flemish Belg.	5	0	0	0	0	0	0	0	0	0	0	0	0	5
Norway	0	0	0	0	0	0	0	0	0	1	0	0	0	1
Romania	1	0	0	0	0	0	0	0	0	0	0	0	0	1
Slovakia	1	0	0	0	0	0	0	0	0	0	0	0	0	1
Totals	7	-	-	-	-	-	-	-	-	1	-	-	-	8

Comments

- The general "Fitness" sports category shows Anabolic Agents as the most frequently used substance by far.

<u>Kickboxing</u>							
NADO	Total tests on Sport	Tests IC	Tests OC	Total Violations	Violations IC	Violations OC	Violations unspecified
Flemish Belg.	78	78	0	13	13	0	0
Denmark	-	-	-	1	-	-	1

<i>Kickboxing</i>	Anabolic Agents	Hormones & related	Beta-2 Antagonists	Masking Agents	Stimulants	Cannabinoids	Glucosteroids	Beta Blockers	T/E	Refusal	Manipulation	Unspecified	Multiple Violations	Totals
Flemish Belg.	0	0	0	0	0	0	0	0	0	3	0	10	0	13
Denmark	-	-	-	-	-	-	-	-	-	-	-	1	-	1
Totals	-	-	-	-	-	-	-	-	-	3	-	11	-	14

- **Flemish** Belgium – Kickboxing – In Competition – 10 doping cases (2 Stimulants, 3 Cannabinoid, 6 Anabolic Agents)
- **Denmark** - kickboxing – (?) – 1 positive

Karate								
NADO	Total tests on Sport	Tests IC	Tests OC		Total Violations	Violations IC	Violations OC	Violations unspecified
French Belg.	11	-	-		1	1	0	0
Switzerland	22	12	10		1	1	0	0

Karate	Anabolic Agents	Hormones & related	Beta-2 Antagonists	Masking Agents	Stimulants	Cannabinoids	Glucosteroids	Beta Blockers	T/E	Refusal	Manipulation	Unspecified	Multiple Violations	Totals
French Belg.	0	0	0	0	1	0	0	0	0	0	0	0	0	1
Switzerland	0	0	0	0	0	1	0	0	0	0	0	0	0	1
Totals	-	-	-	-	1	1	-	-	-	-	-	-	-	2

Motorcycling								
NADO	Total tests on Sport	Tests IC	Tests OC		Total Violations	Violations IC	Violations OC	Violations unspecified
French Belg.	34	-	-		4	3	-	1
Ireland	28	28	0		1	1	0	0

Motorcycling	Anabolic Agents	Hormones & related	Beta-2 Antagonists	Masking Agents	Stimulants	Cannabinoids	Glucosteroids	Beta Blockers	T/E	Refusal	Manipulation	Unspecified	Multiple Violations	Totals
French Belg.	0	0	0	0	1	2	0	0	0	1	0	0	0	4
Ireland	0	0	0	0	0	1	0	0	0	0	0	0	0	1
Totals	-	-	-	-	1	3	-	-	-	1	-	-	-	5

Powerlifting							
NADO	Total tests on Sport	Tests IC	Tests OC	Total Violations	Violations IC	Violations OC	Violations unspecified
Czech Rep.	28	28	0	4	4	0	0
Denmark	98	-	-	3	-	-	3
Flemish Belg.	66	66	0	3	-	-	3
Finland	88	-	-	1	-	-	1
Germany	-	-	-	2	2	0	0
Luxembourg	24	23	1	1	1	0	0
Norway	136	-	-	4	1	0	3
Poland	-	-	-	3	3	0	0

Powerlifting	Anabolic Agents	Hormones & related	Beta-2 Antagonists	Masking Agents	Stimulants	Cannabinoids	Glucosteroids	Beta Blockers	T/E	Refusal	Manipulation	Unspecified	Multiple Violations	Totals
Czech Rep.	2	0	0	0	0	0	0	0	0	1	0	0	1	4
Denmark	-	-	-	-	-	-	-	-	-	-	-	3	-	3
Flemish Belg.	0	0	0	0	0	0	0	0	0	0	0	3	0	3
Finland	1	0	0	0	0	0	0	0	0	0	0	0	0	1
Germany	1	0	0	0	0	0	0	0	0	0	0	0	1	2
Luxembourg	-	-	-	-	-	-	-	-	-	-	-	1	-	1
Norway	2	0	0	0	0	0	0	0	0	2	0	0	0	4
Poland	1	0	0	1	1	0	0	0	0	0	0	0	0	3
Totals	7	-	-	1	1	-	-	-	-	3	-	7	2	21

- **Czech** – Powerlifting – In Competition – 4 Anabolic Agents & 1 Stimulant
- **Denmark** – Powerlifting – (?) – 3 positives
- **Flemish Belgium** – Powerlifting – In Competition – 3 doping cases (1 Stimulant, 1 Narcotics, 1 Anabolic Agent, 1 Diuretic & Masking)
- **Germany** – Powerlifting – In Competition – 1 Anabolic Agent & 1 Diuretic or Masking Agents
- **Luxembourg** – Powerlifting – In Competition – 1 “positive”

Rugby Union & League							
NADO	Total tests on Sport	Tests IC	Tests OC	Total Violations	Violations IC	Violations OC	Violations unspecified
French Belg.	44	-	-	1	-	-	1
Poland	94	-	-	9	8	1	0
Romania	-	-	-	6	6	0	0
Switzerland	16	8	8	1	1	0	0
U.K.	2006	658	1348	8	8	0	0

Rugby	Anabolic Agents	Hormones & related	Beta-2 Antagonists	Masking Agents	Stimulants	Cannabinoids	Glucosteroids	Beta Blockers	T/E	Refusal	Manipulation	Unspecified	Multiple Violations	Totals
French Belg.	0	0	0	0	0	0	0	0	0	1	0	0	0	1
Poland	2	0	0	0	0	3	0	0	0	0	2	0	2	9
Romania	3	0	0	0	0	3	0	0	0	0	0	0	0	6
Switzerland	0	0	0	0	0	1	0	0	0	0	0	0	0	1
U.K.	1	1	0	0	6	0	0	0	0	0	0	0	0	8
Totals	6	1	-	-	6	7	-	-	-	1	2	-	2	25

- **Poland** – Rugby – In Competition – 1 Anabolic Agent & Cannabinoid
- **Poland** – Rugby – In Competition – 1 Stimulant & 1 Anabolic Agent & Cannabinoid

General: "Motorsports"							
NADO	Total tests on Sport	Tests IC	Tests OC	Total Violations	Violations IC	Violations OC	Violations unspecified
Germany	-	-	-	4	4	0	0
Ireland	19	19	0	1	1	0	0
Norway	-	-	-	1	-	-	1

"Motorsports"	Anabolic Agents	Hormones & related	Beta-2 Antagonists	Masking Agents	Stimulants	Cannabinoids	Glucosteroids	Beta Blockers	T/E	Refusal	Manipulation	Unspecified	Multiple Violations	Totals
Germany	0	0	0	0	1	0	1	1	0	1	0	0	0	4
Ireland	0	0	0	0	0	1	0	0	0	0	0	0	0	1
Norway	0	0	0	0	0	0	0	0	0	1	0	0	0	1
Totals	-	-	-	-	1	1	1	1	-	2	-	-	-	6

*

REMAINING SPORTS & GENERAL CATEGORIES

*

Various Sports

NADO / Sport	Total tests on Sport	Tests IC	Tests OC	Total Violations	Violations IC	Violations OC	Violations unspecified
Archery <i>French Belg.</i>	20	-	-	1	-	-	1
Aikido <i>French Belg.</i>	24	-	-	1	-	-	1
Badminton <i>French Belg.</i>	43	-	-	2	2	0	0
Bobsleigh <i>Switzerland</i>	116	12	96	2	-	-	2
Climbing <i>Switzerland</i>	26	22	4	1	1	0	0
Cricket <i>Netherlands</i>	28	24	4	1	1	0	0

Duathlon <i>Flemish Belg.</i>	18	18	0	1	1	0	0
Eisstock <i>Germany</i>	-	-	-	1	1	0	0
Futsal <i>French Belg.</i>	90	-	-	12	-	-	12
Hornuss <i>Switzerland</i>	7	4	3	1	1	0	0
Mountaineering <i>French Belg.</i>	6	-	-	3	2	-	1
Military Sport <i>Finland</i>	-	-	-	1	1	0	0
Pétanque <i>Germany</i>	-	-	-	1	1	0	0
Sailing <i>Switzerland</i>	18	10	8	1	1	0	0
Savate <i>French Belg.</i>	18	-	-	1	-	-	1
Shooto <i>French Belg.</i>	18	-	-	3	-	-	3
Skiing <i>Norway</i>	385	-	-	1	1	0	0
Squash <i>French Belg.</i>	25	-	-	2	1	-	1
Street Hockey <i>Switzerland</i>	4	4	0	3	3	0	0
Strongman <i>Flemish Belg.</i>	24	24	0	1	1	0	0
Sumo <i>Poland</i>	16	-	-	1	1	0	0
Table Tennis <i>French Belg.</i>	24	-	-	3	1	-	2
Taekwondo <i>Netherlands</i>	20	15	5	1	1	0	0
Tennis <i>Czech Rep.</i>	10	10	0	1	-	-	1
Wheelchair BB <i>U.K.</i>	56	36	20	2	2	0	0
Wushu <i>Switzerland</i>	8	8	0	1	1	0	0

Type of Violation

Note: **Blue** highlight denotes sports in which cannabinoids constituted the only violations.

	Anabolic Agents	Hormones & related	Beta-2 Antagonists	Masking Agents	Stimulants	Cannabinoids	Glucosteroids	Beta Blockers	T/E	Refusal	Manipulation	Unspecified	Multiple Violations	Totals
Archery <i>French Belg.</i>	0	0	1	0	0	0	0	0	0	0	0	0	0	1
Aikido <i>French Belg.</i>	0	0	0	0	0	0	0	0	0	1	0	0	0	1
Badminton <i>French Belg.</i>	0	0	0	0	0	1	1	0	0	0	0	0	0	2
Bobsleigh <i>Switzerland</i>	2	0	0	0	0	0	0	0	0	0	0	0	0	2
Climbing <i>Switzerland</i>	0	0	0	0	0	1	0	0	0	0	0	0	0	1
Cricket <i>Netherlands</i>	0	0	0	0	0	1	0	0	0	0	0	0	0	1
Duathlon <i>Flemish Belg.</i>	0	0	0	0	0	0	1	0	0	0	0	0	0	1
Eisstock <i>Germany</i>	0	0	0	0	0	0	0	1	0	0	0	0	0	1
Futsal <i>French Belg.</i>	-	-	-	-	-	-	-	-	-	3	-	9	-	12
Hornuss <i>Switzerland</i>	0	0	0	0	0	1	0	0	0	0	0	0	0	1
Mount'ring <i>French Belg.</i>	0	0	1	0	0	1	1	0	0	0	0	0	0	3
Military Sport <i>Finland</i>	0	0	0	0	0	1	0	0	0	0	0	0	0	1
Pétanque <i>Germany</i>	0	0	0	0	0	1	0	0	0	0	0	0	0	1
Sailing <i>Switzerland</i>	0	0	0	0	0	1	0	0	0	0	0	0	0	1
Savate <i>French Belg.</i>	0	0	0	0	0	0	0	0	0	1	0	0	0	1
Shooto <i>French Belg.</i>	2	0	0	0	0	0	0	0	0	1	0	0	0	1
Skiing <i>Norway</i>	0	0	0	0	0	1	0	0	0	0	0	0	0	1
Squash <i>French Belg.</i>	0	0	0	0	0	1	0	0	0	1	0	0	0	2
Street Hockey <i>Switzerland</i>	0	0	0	0	0	3	0	0	0	0	0	0	0	3
Strongman	1	0	0	0	0	0	0	0	0	0	0	0	0	1

<i>Flemish Belg.</i>															
Sumo <i>Poland</i>	0	0	0	1	0	0	0	0	0	0	0	0	0	1	
Table Tennis <i>French Belg.</i>	0	0	1	0	0	1	0	0	0	1	0	0	0	3	
Taekwondo <i>Netherlands</i>	0	0	0	0	1	0	0	0	0	0	0	0	0	1	
Tennis <i>Czech Rep.</i>	0	0	0	0	1	0	0	0	0	0	0	0	0	1	
Wheelchair Basket Ball <i>U.K.</i>	0	0	0	0	0	2	0	0	0	0	0	0	0	2	
Wushu <i>Switzerland</i>	0	0	0	0	0	1	0	0	0	0	0	0	0	1	

Futsal

- French Belgium – Futsal – (?) – **9 doping cases** (1 Stimulant, 5 Cannabinoid, 1 Anabolic Agent, 1 Beta-2 Antagonist, 2 Diuretics or Masking Agents)

General Sports Categories							
Nation / Sport	Total tests on Sport	Tests IC	Tests OC	Total Violations	Violations IC	Violations OC	Violations unspecified
Bob & Athletics <i>Switzerland</i>	-	-	-	1	-	-	1
Strength Sport <i>Netherlands</i>	77	58	19	5	-	-	5
Martial Arts <i>Norway</i>	164	-	-	1	1	0	0
Paralympics Sport <i>Germany</i>	-	277	-	6	4	2	0
Watersports <i>French Belg.</i>	63	-	-	4	3	-	1

	Anabolic Agents	Hormones & related	Beta-2 Antagonists	Masking Agents	Stimulants	Cannabinoids	Glucosteroids	Beta Blockers	T/E	Refusal	Manipulation	Unspecified	Multiple Violations	Totals
Bob & Athletics <i>Switzerland</i>	1	0	0	0	0	0	0	0	0	0	0	0	0	1
Strength Sport <i>Netherlands</i>	4	0	0	0	0	0	0	0	0	0	0	0	1	2
Martial Arts <i>Norway</i>	0	0	0	0	1	0	0	0	0	0	0	0	0	1
Paralympics Sport <i>Germany</i>	0	0	0	5	0	0	1	0	0	0	0	0	0	6
Watersports <i>French Belg.</i>	0	0	0	0	0	2	0	0	0	1	0	0	1	4

- **Netherlands** – “Strength Sports” – (?) – 2 Anabolic Agents & T/E
- **French Belgium** – “sports nautiques” – In Competition – 1 Cannabinoid & 1 Anabolic Agent

Conclusions

It had been hoped that in this section a relationship could have been identified between violations type and in and out of competition testing. Unfortunately, as evidenced by all of these tables, the information available to the public via the annual reports is far **too fragmentary** to make any accurate conclusions on the issue.

All that we can say is that across all NADOs, no matter for which sport, in-competition violations almost always surpass the number of out of competition violations irrespective of how many tests were conducted in and out of competition on that particular sport.

f. Number of Violations in and out-of-competition

	Total N° of Athlete offenders in competition	Total N° of Athlete offenders out of competition
Belgium (Flemish)	104	12
Belgium (French)	NS	NS
Czech Republic	NS	NS
Denmark	NS	NS
Finland	NS	NS
Germany	23	4
Ireland	3	0
Latvia	NS	NS
Luxembourg	3	0
Netherlands	NS	NS
Norway	NS	NS
Poland	34	3
Romania	28	5
Serbia	2	0
Slovakia	7	0
Switzerland	NS	NS
United Kingdom	18	4
TOTALS =	222	28

The table above excludes data from the NADOs of the Czech Republic, Denmark, French Belgium, Finland, Latvia, Netherlands, Norway and Switzerland as none provided complete information regarding numbers of athlete offenders in and out-of-competition.

30,904²¹ tests were conducted by the remaining nine NADOs of which 13,738 tests were conducted in-competition, and 17,166²² out-of-competition.

Of these tests, 222 violations were listed as having occurred in-competition, and 28 out-of-competition.

According to this data, it therefore took 61.9 **in-competition** tests to catch one athlete in violation of the Code ***in competition – 1.6% of tests resulted in a violation.***

It took 613.1 **out-of-competition** tests to catch one athlete in violation of the Code ***out of competition - .016% of tests resulted in a violation.***

Comments: These statistics show that in 2009, to catch an athlete violating the Code out-of-competition necessitated nearly **ten times** as many tests as were required to catch an athlete violating the Code in-competition.

²¹ The figure would be 31,272 if the “unspecified” 368 tests from the German NADO’s statistics were counted

²² The fact that there is a large difference between in and out of competition tests here can be explained by the fact that the German NADO conducted 9040 out of competition tests with just 4878 in competition tests.

g. Number of violations - in and out-of-competition per sport

The table below breaks down the number of violations for each sport in and out-of-competition.

Where NADOs did not identify whether a violation occurred in or out of competition, the violation is tabulated in the “violations not identified” column.

i. Sport	<i>n° Violations</i>	<i>Violations In competitio n?</i>	<i>Violations out of Competitio n?</i>	<i>In/Out competition violations not identified?</i>
Aïkido	1	NS	NS	1
Archery	1	NS	NS	1
Climbing Sport	1	1	0	0
Cricket	1	1	0	0
Duathlon	1	1	0	0
Eisstock	1	1	0	0
Hornuss	1	1	0	0
Military Sport	1	1	0	0
Pétanque	1	1	0	0
Sailing	1	NS	NS	1
Savate	1	NS	NS	1
Skiing	1	1	0	0
Strongman	1	1	0	0
Sumo	1	1	0	0
Taekwondo	1	1	0	0
Tennis	1	1	0	0
Wushu	1	1	0	0
Autosport	2	1	NS	1
Badminton	2	2	0	0
Bobsleigh	2	NS	NS	2
Canoe	2	2	0	0
Equestrian	2	2	0	0
Floorball	2	1	NS	1
Karate	2	2	0	0
Shooting	2	1	NS	1

Sport	<i>n° Violations</i>	<i>Violations In competitio n?</i>	<i>Violations out of Competitio n?</i>	<i>In/Out competition violations not identified?</i>
Squash	2	1	NS	1
Swimming	2	1	NS	1
Wheelchair Basketball	2	2	0	0
Gymnastics	3	3	0	0
Ice Skating	3	2	NS	1
Judo	3	3	0	0
Mountaineer	3	2	NS	1
Shooto	3	NS	NS	3
Street Hockey	3	3	0	0
Table Tennis	3	1	NS	2
Athletics	4	1	1	2
Billiards	4	3	NS	1
Water polo	4	2	NS	2
Baseball	5	3	NS	2
Handball	5	4	NS	1
Hockey	5	3	NS	2
Motorcycle	5	3	NS	1
Triathlon	6	5	NS	1
Volleyball	6	4	NS	2
Wrestling	7	6	1	0
American Football	8	7	NS	1
Fitness	8	2	5	1
Football	11	5	4	2
Ice Hockey	11	9	NS	2
Boxing	12	7	NS	5
Futsal	12	NS	NS	12
Basketball	14	10	NS	4

Sport	<i>n° Violations</i>	<i>Violations In competitio n?</i>	<i>Violations out of Competitio n?</i>	<i>In/Out competition violations not identified?</i>
Kickboxing	14	13	NS	1
Powerlifting	21	14	NS	7
Weightlifting	21	12	1	8
Rugby	25	23	1	1
Cycling	33	25	2	6
Bodybuilding	121	77	11	33
Total:	422	281	26	115

General Sports Categories				
Bobsleigh & Athletics	1	NS	NS	1
Martial Arts	1	1	0	0
Water Sport	4	3	NS	1
Strength Sports	5	NS	NS	5
Motorsports	6	5	NS	1
Paralympic Sport	6	4	2	0
Total:	23	13	2	8

Combined Total	445	294	28	123
-----------------------	------------	------------	-----------	------------

h. Analysis – In and out of competition

A total of **445** violations were found in 58 sports and 6 general categories.

123 violations (28% of violations) were not identified by NADOs as in-competition or out-of-competition.

Of the remaining 322 violations, **294 (91%) were in-competition and 28(9%) were out of competition.**

Ten times more violations were found in-competition than out-of- competition.

With the sole exception of “Fitness” sports, the majority of violations in all sports occurred during in-competition testing. 20 sports – or **one third** of the 64 sports represented here – have only in- competition violations.

j. Individual Cases

* It must be noted that, in the case of French Belgium, Switzerland, Norway, the Czech Republic and the Netherlands, we can work out if some tests were in-competition even if the total numbers of in- competition and out-of-competition statistics are not given. This is possible because all these NADOs list the chemical formula or medical name for the substance found. From this data we can see if any of their violations fall into WADA’s 2009 Prohibited List of substances banned only in-competition (such as Cannabis, Cocaine and various mild stimulants).

The substance groups banned in-competition, but not out-of-competition (according to WADA’s 2009 Prohibited List) are:

- S6: Stimulants
- S7: Narcotics
- S8: Cannaboids
- S9: Glucocorticosteroids

These findings will supplement those of NADOs that already state whether their individual tests and results occurred in or out-of-competition.

Table – Ratios: Number of tests to number of violations per NADO

3. Substances

<i>Total Number of violations discovered per NADO</i>	Number of tests conducted per Violation	Percent – violations per test (NADO)
Belgium (Flemish)	18.5	5.40 %
Belgium (French)	16.3	6.12%
Czech Republic	48.6	2.06 %
Denmark	118.9	0.84 %
Finland	301.7	0.33 %
Germany	529.1	0.19 %
Ireland	276.3	0.36 %
Latvia	156	0.64 %
Luxembourg	63.7	1.57 %
Netherlands	187.9	0.53 %
Norway	177.2	0.56%
Poland	71.5	1.4%
Romania	91.8	1.09 %
Serbia	34.5	2.9 %
Slovakia	116.9	0.86 %
Switzerland	61.6	1.62 %
United Kingdom	329.9	0.3 %

a. Introduction

Having established the number of violations occurring among the aforementioned 64 sports or sports categories, the next step is to identify the type of substance abuse committed in each sporting category.

The objective of this section is to determine which substances are most common in the respective sports. This data could also help NADOs identify sports at higher risk of certain kinds of doping, especially when they test foreign athletes on behalf of international federations or at international competitions.

Interpreting and comparing these statistics has not been. Several factors prevented us from making what should have been a simple and straightforward comparison of the types of violations occurring throughout Europe.

b. Initial Plan

Originally, two tables were planned;

The first statistics table (Table 2, featured below) is a straightforward comparison of the number and type of “violation” committed (Anabolic Steroid, Cannabinoid etc.) per sport. This permits us to see which substance or other violation was the most common out of the 64 sports and on an individual basis.

A second statistics table which was scrapped due to reasons discussed below, would have ignored the number of confirmed “violations” (for an athlete commits a “violation” irrespective of the number of banned substances found) and instead would

have counted the total number of prohibited substances or methods found. Athletes can and do test positive for more than one prohibited substance and as a result they cannot be easily classified under one violation category according to the WADA Prohibited Substances list of 2009. This would theoretically have helped identify the most popular substance in use and demonstrate in which sports an athlete was more likely to dope with several substances.

c. Problems of Categorisation & Substance Identification

The argument for the standardisation of public anti-doping reporting is further strengthened by the fact that neither of the two tables was completed as envisaged. NADOs chose to present the identified and confirmed “violations” differently.

First, for the second table to have worked we need to know how many substances (even if they were of the same type) were found per confirmed doping violation. Nevertheless, if two anabolic agents were found it would be (correctly) classified as one violation with anabolic agents. The problem lies with the fact that it is not clear (when the exact compounds are unnamed) if there were more than one of the same types of substance found. We therefore do not know how many substances were found per violation unless the NADO specifically states it was so.

Second, some NADOs in their reports stated the exact scientific name of the substance found including the chemical formula without stating in which WADA category it fell or what conformed substance violation was committed by the athlete (e.g. in Poland, Romania and the Czech Republic).

This could be advantageous only if an athlete tested positive for more than one type of substance and could not be easily classified under the 2009 Prohibited Substance list. Nevertheless to identify the substance categories (few of the reports have an English translation) is somewhat difficult.

Third, in a minority of cases, such as in both Flemish and French Belgium, only one “hormone” category is mentioned when there are in fact two WADA Prohibited Substance categories which could fall under this general term: “Hormone Antagonists and Modulators” and simply “Hormones and related substances”. Although we could (and will) assume that “hormones” fits into the latter category, we must ask where the “Hormone Antagonist” category fits in or if any were detected.

Fourth, Denmark and Luxembourg only listed the exact number of “positives” without stating what the athletes were “positive” for – whether a particular substance, several substances or another kind of violation.

Fifth, in a related issue, the French and Flemish Belgian reports may list the number of doping cases, but they also list the number and type of substances found separately. Consequently, the total number of violations does not add up to the total number of substances detected or violations committed. We therefore cannot say for certain if a single athlete tested positive for a Narcotic alone, or a Narcotic and 2 Beta Blockers (for example). This data cannot be categorised and used in calculations, and has to be mentioned separately.

Sixth, the Czech Republic’s results show single “T/E ratios” as reason for a violation without stating what did or may have caused the imbalance. Whether or not this category should be included in the Anabolic Agents category or other category is not

clear (since the Czech Republic's results table does not follow up with what substance was discovered) and thus it also has to be listed separately.

d. The Amended Table

As a consequence of these limitations, to attempt to create the second type of table, so tallying the number of substances found per sport irrespective of individual "violations", was not feasible.

The first table was predictably not immune to these aforementioned problems either, and had to be modified to accommodate these limitations and expose these variables and anomalies. Consequently, the results of this section of the report will be an informed but only a general impression, even though it is using the best data that is publicly available.

First, because of the aforementioned data limitations, we have to resort to the lowest common denominator again to obtain the most reliable data possible. This means that we will as far as possible place all violations within the substance categories listed in the 2009 WADA Prohibited List.

For example, if an athlete tests positive for 3 stimulants he/she will nevertheless be added to the table as a single "violation" under "Stimulants". In such a way, we align ourselves with the way the majority of NADOs classify their violations and so obtain a more reliable result in the final analysis.

Second, two extra columns were added to the table below to signify (a) "positives" or "unspecified" violations for which no detail was given and we do not know what category of substance was found per violation - (b) "multiple infringements" –violations in which several prohibited categories of substance were identified.

Furthermore, should an athlete test positive for several different substances, the sport in which it occurred and the substances found will be listed beneath the table proper.

Third, one extra column had to be added to include elevated T/E ratios to accommodate the Czech results which only list the T/E ratio as a cause for sanction without showing what substance was responsible for the T/E anomalies.

e. Table Description

- All the substance categories listed are the same used in the 2009 Prohibited Substance list.
- The categories of sport or sports listed are those recognised by the IOC, International Federations and some within a national context such as Hornuss.
- **Bold** indicates Olympic Sports
- The category "Unspecified Violation" is included because we need to know exactly how many violations occurred per test for our calculations to be as accurate as possible. Therefore, if there were 5 violations in one sport, and 8 different prohibited substances were detected, we will place the violations in the "unspecified" category. Likewise, all violations will be placed in that category if an explanation as to what kind of violation it was is given.

TABLE 1																						
Violations: Total Number of "Violations" discovered per Sport	Anabolic Agents	Hormones & related	Beta-2 Antagonists	Hormone Antagonists & Modulators	Diuretics & Masking Agents	Stimulants	Narcotics	Cannabinoids	Glucosteroids	Beta Blockers	Alcohol		Refusals	Whereabouts Violations	Prohibited methods	Test Manipulation	Elevated T/E ratio		Multiple infringements		Unspecified Violation le. "1 positive"	Total Violations
Aikido	-	-	-	-	-	-	-	-	-	-	-		1	-	-	-	-		-		-	1
Archery	-	-	1	-	-	-	-	-	-	-	-		-	-	-	-	-		-		-	1
American football	-	-	-	-	-	2	-	5	-	-	-		-	-	-	-	-		-		1	8
Athletics	2	-	-	-	-	1	-	-	-	-	-		-	-	-	-	-		-		1	4
Autosport	-	-	-	-	-	1	-	-	-	-	-		1	-	-	-	-		-		-	2
Badminton	-	-	-	-	-	-	-	1	1	-	-		-	-	-	-	-		-		-	2
Baseball	-	1	-	-	-	2	-	1	-	-	-		-	-	-	-	-		1		-	5
Basketball	1	-	1	-	1	-	-	10	-	-	-		1	-	-	-	-		-		-	14
Billiards & related	-	-	-	-	-	1	-	1	-	-	-		1	-	-	-	-		1		-	4
Bob & Skeleton	2	-	-	-	-	-	-	-	-	-	-		-	-	-	-	-		-		-	2
Bodybuilding	25	-	-	-	-	1	-	1	-	-	-		36	-	-	1	2		10		45	121
Boxing	2	-	-	-	1	1	-	4	-	-	-		3	-	-	-	-		-		1	12
Canoe	1	-	-	-	-	-	-	-	1	-	-		-	-	-	-	-		-		-	2
Climbing	-	-	-	-	-	-	-	1	-	-	-		-	-	-	-	-		-		-	1
Cricket	-	-	-	-	-	-	-	1	-	-	-		-	-	-	-	-		-		-	1
Cycling	4	3	8	-	-	8		3	1	-	-		4	-	-	-	1		?		1	33
Duathlon	-	-	-	-	-	-	-	-	1	-	-		-	-	-	-	-		-		-	1
Eisstock	-	-	-	-	-	-	-	-	-	1	-		-	-	-	-	-		-		-	1
Equestrian	-	-	-	-	-	1	-	1	-	-	-		-	-	-	-	-		-		-	2
Fitness	7	-	-	-	-	-	-	-	-	-	-		1	-	-	-	-		-		-	8
Floorball	-	-	1	-	-	-	-	-	-	-	-		-	-	-	-	-		-		1	2
Futsal	-	-	-	-	-	-	-	-	-	-	-		3	-	-	-	-		-		9	12
Football	1	-	-	-	-	5	-	3	-	-	-		1	-	-	-	-		1		-	11
Gymnastics	-	-	-	-	-	2	-	1	-	-	-		-	-	-	-	-		-		-	3
Handball	-	-	-	-	1	2	-	2	-	-	-		-	-	-	-	-		-		-	5

TABLE 1 Cont.	<i>Violations: Total Number of "Violations" discovered per Sport</i>																		
	Anabolic Agents	Hormones & related	Beta-2 Antagonists	Hormone Antagonists & Modulators	Diuretics & Masking Agents	Stimulants	Narcotics	Cannabinoids	Glucosteroids	Beta Blockers	Alcohol	Refusals	Whereabouts Violations	Prohibited methods	Test Manipulation	Elevated T/E ratio	Multiple infringements	Unspecified Violation	Total Violations
Hockey	-	-	2	-	-	-	-	3	-	-	-	-	-	-	-	-	-	-	5
Hornuss	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	1
Ice Hockey	2	-	-	-	-	2	-	6	1	-	-	-	-	-	-	-	-	-	11
Ice Skating	1	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	1	3
Karate	-	-	-	-	-	1	-	1	-	-	-	-	-	-	-	-	-	-	2
Kickboxing	-	-	-	-	-	-	-	-	-	-	-	3	-	-	-	-	-	11	14
Judo	-	-	-	-	-	1	-	2	-	-	-	-	-	-	-	-	-	-	3
Military Sports	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	1
Motorcycle	-	-	-	-	-	1	-	3	-	-	-	1	-	-	-	-	-	-	5
Mountaineering	-	-	1	-	-	-	-	1	1	-	-	-	-	-	-	-	-	-	3
Pétanque	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	1
Powerlifting	7	-	-	-	1	1	-	-	-	-	-	3	-	-	-	-	2	7	21
Rugby	6	1	-	-	-	6	-	7	-	-	-	1	-	2	-	-	2	-	25
Sailing	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	1
Savate	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	1
Skiing	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	1
Shooting	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	1	2
Shooto	2	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	3
Squash	-	-	-	-	-	-	-	1	-	-	-	1	-	-	-	-	-	-	2
Strongman	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
Street Hockey	-	-	-	-	-	-	-	3	-	-	-	-	-	-	-	-	-	-	3
Swimming	1	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	2
Sumo	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	1
Table Tennis	-	-	1	-	-	-	-	1	-	-	-	1	-	-	-	-	-	-	3

<i>TABLE 1 Cont.</i>	Anabolic Agents	Hormones & related	Beta-2 Antagonists	Hormone Antagonists & Modulators	Diuretics & Masking Agents	Stimulants	Narcotics	Cannabinoids	Glucosteroids	Beta Blockers	Alcohol	Refusals	Whereabouts Violations	Prohibited methods	Test Manipulation	Elevated T/E ratio	Multiple infringements	Unspecified Violation ie. "1 positive"	Total Violations
<i>Violations: Total Number of "Violations" discovered per Sport</i>																			
Taekwondo	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	1
Tennis	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	1
Triathlon	-	-	2	-	1	2	-	-	-	-	-	-	-	-	1	-	-	-	6
Volleyball	-	-	-	-	-	-	-	2	-	-	-	2	-	-	-	-	-	2	6
Water polo	-	-	-	-	1	1	-	1	-	-	-	1	-	-	-	-	-	-	4
Weightlifting	8	-	-	-	-	2	-	4	-	-	-	-	-	-	-	-	-	7 ²³	21
Wheelchair Basketball	-	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-	-	-	2
Wrestling	1	-	-	-	2	1	-	1	-	-	-	-	-	-	-	-	1	1 ²⁴	7
Wushu	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	1
Bob & Athletics	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
Martial Arts	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	1
Strength Sports	5 ²⁵	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5
Motorsports						1		1	1	1		2							6
Paralympic Sports	-	-	-	-	5	-	-	-	1	-	-	-	-	-	-	-	-	-	6
Watersports	-	-	-	-	-	-	-	2	-	-	-	1	-	-	-	-	1	-	4
Totals	80	5	17	0	15	49	0	83	8	2	0	71	0	0	4	3	19	89	445
As a Percentage of 445 violations	18.0	1.1	3.8	-	3.4	11.0	-	18.7	1.8	0.4	-	16.0	-	-	0.9	0.67	4.3	20	100%

²³ All 7 "positives" are from the Danish NADO

²⁴ The 6th violation, discovered by a German NADO, is for being caught in possession of a prohibited substance under Code article 2.6

²⁵ One of the five caught was also found to have an elevated T/E ratio on top of the Anabolic Agent discovery

g. Interesting Individual Cases

- **Germany** - (A) One speed-skater was listed as having violated the Code in the 2009 annual report, however it merely states that the violation came under article 2.2 of the code which means he or she either tested positive for one or more prohibited substances or there was an attempt at test manipulation. Hence the question marks that indicate uncertainty.
- (B) Another athlete was shown to have violated section 2.6 of the code – guilty of “possession” of a substance or prohibited method. This was a violation but the only one of its kind of all the European NADOs - hence the figure of 29.
- **Poland** = On page 18 of its annual report, the Polish NADO claimed that the most common substance found among the 37 athletes who committed doping violations was in the Anabolic Agents group at 16 instances. However, on pages 19 - 20 the Polish NADO gives a breakdown of all the substances found per athlete and we could count no less than 21 cases of anabolic agents being used between athletes (a minority having tested positive for two or more). This can be explained by the fact that the Polish NADO did not count cases where **only** Anabolic Agents were found – instead it counted the number of violations in which an Anabolic Agent was present.
- **Norway** = The results table included in the Norwegian Annual Report for 2009 (page 19) was used as it shows all of the legally binding decisions taken by the Anti-Doping agency in 2009. This was instead of the list of statistics used on page 18 that stated who was responsible for decision making, cases dismissed, the number of cases handled by the prosecution committed and the number of cases reported to the NOC’s adjudication committee. It was not clear how many cases there were or how it related to the legally binding decisions in the table on page 19 and thus the latter was favored in compiling the results.

h. “Multiple Violations”

There were 19 cases in 2009 where athletes tested positive for more than one category of prohibited substance

10 of the 19 cases occurred in bodybuilding with seven sports, total.

- There were 15 cases of athletes using Anabolic Agents
- There were 8 cases of Diuretic or Masking Agents being used
- There were 7 cases of Cannabinoid use
- There were 6 cases of Stimulant use
- There were 3 cases of Hormone Antagonist use
- There was one case of Narcotic and Beta-2 Antagonist use

i. Non-identified substances

We cannot identify what substance or practiced produced the “code violation” in 89 cases These unspecified violations account for 20 % of all violations detected in 2009

Note: A detailed list and analysis of the violations resulting from non-identified substances and violations resulting from the use of multiple substances can be found in the appendix.

j. General Analysis of Substances and Violations

According to the table of violations, there were no single violations for Hormone antagonists or Narcotics. However, 1 Narcotic and 3 Hormone Antagonists were present in four of the athletes who committed “multiple violations”.

WADA’s Laboratory Statistics for 2009 show that 64.9% of all substances identified were Anabolic Agents, followed by Cannabinoids at only 7.8 %. Of all the *single type substance violations* compiled above (259 of them) only 30% were Anabolic Agents, while 32 % were Cannabinoids.

This significant difference between the results compiled for this report and WADA’s “laboratory statistics” is not explained. There are two possible explanations for this.

The first is that European Sport as a whole is unique in either its high use of Cannabinoids or alternately its relatively small use of Anabolic Agents.

The second and more plausible theory is that the WADA “laboratory statistics” do not discount TUEs granted because the accredited laboratory report simply lists the substances found, rather than violations committed. TUEs are granted for the use of Anabolic Agents, particularly medication, upon application or a hearing – and the outcomes of these appeals or declarations of use are not reflected in these laboratory statistics. This may explain the large difference in figures.

In spite of this major discrepancy, it is clear that from the data gathered from this diverse group of 17 European NADOs that the overall pattern of usage is different from the Global averages alluded to in the Laboratory Statistics Report.

Refusals; What is intriguing is that “Refusals” account for such a large proportion of violations. This anomaly is explained below in the sports section.

k. General Analysis of Substances and Sports

It is important to recognise some general patterns in terms of type of substance and frequency if their uses in individual sports.

First, What is immediately apparent from the substance/sport tables is that although Anabolic Agents certainly account for the largest number of violations in total, the majority of their users are in “strength sports”.

The majority of single anabolic violations occurred in:

- Bodybuilding, with 25 positives
- Weightlifting, with 7 positives
- Fitness, with 7 positives
- Powerlifting, with 7 positives
- Rugby (union and league combined), with 6 positives

These five sports account for 65% of all single violation anabolic agent abuse, or 52 of a total of 80 anabolic substance violations, spread across 21 different sports and sports categories.

Second: it is interesting to note that of the athletes found to have committed “multiple violations” groups (the full list available in the Appendix), 14 of the 19 were participants in one of the five sports categories listed above.

- 10 in Bodybuilding
- 2 in Powerlifting

- 2 in Rugby (union and league combined)

Of these 14 athletes, all used Anabolic Agents. Moreover, 7 of the 14 (6 in Bodybuilding and one in Powerlifting) also used Diuretics or Masking Agents, presumably to hide the use of the Anabolic Substances.

The majority of multiple violations occurred in Bodybuilding, Powerlifting and Rugby (union and league combined)– the remaining five sports only exhibiting one multiple violations each.

Furthermore, although we cannot use the statistics from the “unspecified” violations with authority (the full list also available in the Appendix), the aforementioned pattern appears to have been repeated.

- Of 79 athletes (excluding the 17 “positives” between Luxembourg and Denmark) – 48 of the violations occurred between Bodybuilding (45) and Powerlifting (3).
- 40 of the substances detected were Anabolic Agents, followed by 12 Masking Agents, 6 stimulants 5 Cannabinoids and 1 Beta-2 Antagonist and 1 Narcotic.

Third, refusals are the third largest group of recorded violations after Anabolic Agents and Cannabinoids. For the most part, refusals to submit to testing are spread fairly evenly across all sports. There is only one sport where they seem to be grouped together in any significant numbers – and this Bodybuilding with 36 refusals in total.

Interestingly, 31 of these 36 refusals originate from French and Flemish Belgian results.

Fourth, the Cycling results exhibit two interesting features:

- First – the violations in Cycling cover **eight** different categories or types of violation. This is the largest spread of all the sports. Only bodybuilding comes second with a spread of six.
- Second – Cycling has the largest number of violations in both the Stimulants category and the Beta-2 Antagonists category, each with **eight** reported violations.

***Note on Cycling:** The results of the Flemish Belgian NADO are also responsible for this wide spread of violation types. More detail can be found in the previous tables.

20% of all doping violations reported in the dataset were for unspecified violations. This is far from ideal and needs to be addressed.

I. Cannabis

Cannabinoids have been shown not only to be the most frequently used prohibited substance (just ahead of Anabolic Agents by three violations according to our findings), but;

- Cannabinoid usage has the largest spread of any of the other prohibited substances found in 38 of the all 64 sports categories. By comparison, Stimulants come second and are found in 26 sports while Anabolic Agents in just 21.
- Violations involving Cannabinoids are the **only type** of violation to be recorded in 10 sports. By contrast, sports that recorded violations only involving Stimulants accounted for just 3 violations - the second largest group after Cannabis.

The top sports for single cannabis violations were:

1. **Basketball** 10 violations
2. **Rugby** (both union and league) 7 violations
3. **Ice Hockey** 6 violations
4. **American Football** 5 violations
5. **Boxing** 4 violations
6. **Weightlifting** 4 violations

Cannabinoids	18.7%
Anabolic Agents	18.0 %
Refusals	16.0%
Stimulants	11.0%
Multiple Code Violations	4.3%

The majority of Anabolic Agents violations occurred within the “strength sports” like bodybuilding and weight lifting.

By contrast, cannabinoid offences by contrast seemed to be spread broadly across a range of sports.

It is interesting to note the differences between WADA laboratory statistics and our own analysis with regards to the proportion of anabolic agent violations - 64.9% compared to 30% of all substances detected - and Cannabinoids- 7.8% and 32% of all substances detected. There may be a number of legitimate reasons for such a large difference but it is certainly worth further investigation.

Section 3: Executive Summary

Précis

Anti-doping in sport is a multi-million Euro industry employing thousands of people that impacts upon the day-to-day lives of every professional athlete. It relies upon cutting-edge biological, chemical and medical investigations. However there is a paucity of publicly available statistical evidence to support current policies and practices on drug testing programmes for athletes.

The lack of statistical evidence to support an effective, proportional and efficient drug testing regime raises serious questions about WADA's management of the World Anti-Doping Code.

It is hard to avoid the conclusion that the World Anti-Doping Agency has little or no evidence about the effectiveness of international drug testing for athletes. This has serious implications for its drug testing policies and procedures; if they are not based on hard statistical evidence then we must question how these policies are being developed and monitored.

WADA is already aware of the lack of statistical evidence on the efficacy of international drug testing yet has done little to address the shortcoming. There are clear and obvious failings in the limited statistics that WADA does publish. These omissions combined with the lack of detail renders them almost meaningless for any detailed analysis of anti-doping statistics.

The findings of this report strongly suggest that WADA is in breach of the World Anti-Doping Code with regards to Article 14.4. It is failing to collect and publish comprehensive national anti-doping statistics despite being required to do so by its own Code.

Of the 49 European NADOs listed as signatories of the WADA Code on its website, only 20 have produced some kind of report or summary of statistical findings for 2009 available online.

Using the best publicly available statistics from National Anti-Doping Organizations in Europe in 2009, the research within this report casts significant doubt on the efficacy of out-of-competition drug testing. Due to the problems with the publicly available data, which are well documented in the body of this report, the findings need to be treated with a degree of caution but the analysis of the statistics for the nine NADOs that published the relevant data found that:

- It takes at least 600 out-of-competition drug tests to catch one drug cheat.
- It takes 62 in-competition tests to catch one drug cheat
- The average rate of violations per test for the whole of Europe (both in and out of competition) is 1%

These findings raise serious questions, particularly given that WADA is insistent that no-notice, out-of-competition drug testing is essential for drug free sport. The available evidence casts significant doubt upon the current focus on out-of-competition testing as it is currently applied.

The report also found that anti-doping violations seem to be grouped around a limited number of specific sports and countries. The vast majority of sports and countries had very few positive drug findings in 2009.

Unfortunately it has not been possible to examine the effectiveness of the controversial Athlete Whereabouts Requirement directly, as there is hardly any public data available. This lack of direct evidence is simply not good enough and needs to be urgently addressed given athletes concerns about the system (i.e. German player protest December 2010).

WADA is starting its process of redrafting the World Anti-Doping Code. The findings of this report should be an urgent wake-up call for improved international statistics on drug testing. It suggests a radical overhaul is needed in anti-doping policy and procedures with a strong focus on statistical evidence to support policies that are effective, efficient and proportionate.

Athletes want and need a drug testing policy that works. This will require the collection and analysis of the statistical evidence to ensure that the World Anti-Doping Code is based on best practice to ensure that the available resources are properly targeted at catching cheats.

Conclusions

The publicly available statistics on anti-doping fall short of what is required and expected to undertake a comprehensive and rigorous analysis of the efficiency, effectiveness and proportionality of anti-doping policy and practice for the whole of Europe.

Despite the fact that Article 14.4 of the World Anti-Doping Code requires all NADOs to publish annual reports, this is not implemented consistently.

WADA is not fulfilling its requirement under the Code publish unified testing statistics in a transparent and accountable manner.

It is a concern that no standardized system of public anti-doping reporting has been implemented in the ten years that WADA has been in existence. This situation is deeply unsatisfactory and seriously undermines the good work that WADA has achieved.

Based on WADA's 2009 "ADO Statistics" report and the research conducted for this report, only 11 out of a total of 49 European NADOs would appear to be in full compliance with Article 14.4 of the Code which requires all NADOs to publish and submit annual reports on testing statistics.

Nine NADOs have annual reports available online but are not listed in WADA's 2009 "ADO Statistics" Report. The reliability of WADA's published "ADO Statistics" therefore falls well short of what is expected and required.

The different NADO reporting regimes across Europe creates ambiguities and difficulties in comparing data on individual sports. Such a situation is far from satisfactory and threatens to undermine the basis for an effective, efficient and proportional evidence based drug testing policy.

It should be noted that the complaints about the lack of comparability between the individual reports prepared by the European NADOs should not necessarily be seen

as a criticism of these NADOs which are of course primarily focussed on their own countries.

The difficulties encountered in attempting to compare annual reports and statistical summaries prevent any interested party being able to independently verify WADA's anti-doping statistics. The ability to independently verify these figures is fundamental to both "transparency" and "accountability" - ideals which WADA places at the heart of its operations according to the organisation's "Strategic Plan 2007-2012".

Proportionality is an important issue in anti-doping policy, particularly with regards to human rights. There is an ongoing debate about the legality of certain aspects of the WADA Code that will inevitably come down to a question of proportionality. However the lack of publicly available statistics means that it is now extremely hard to identify the proportionality of any human rights concerns.

The available public data from 2009 prevents any attempt to carry out any analysis of the effectiveness of the controversial Athlete Whereabouts Requirements contained within the new Code.

The difficulties with the data are well documented throughout the report. This has meant that the following findings need to come with a statistical health warning. Nevertheless they use the best European comparison data from the publicly available information.

There were at least 44,744 drug tests carried out on athletes by the 17 European NADOs within the dataset studied.

There were 445 violations found as a result of these tests, equivalent to a 1% rate of violations per test.

Interestingly Flemish and French Belgium were responsible for 207 violations in 2009. This is a disproportionately large number of violations and merits further detailed investigations.

On average it takes 100.6 tests to uncover one violation throughout Europe, and 1% of the combined tests throughout Europe resulted in a confirmed violation.

Only nine NADOs distinguish between in and out of competition testing in their reports. These nine NADOs conducted a total of 30,904²⁶ tests of which 13,738 were in competition and 17,166 were conducted out of competition. There were 222 violations in competition and 28 violations out of competition. 0.16% of out of competition tests resulted in a violation while 1.6% of in competition tests resulted in a violation. WADA repeatedly stresses the need for no-notice, out-of-competition drug testing if anti-doping policy is going to be effective. However the research, albeit with its limited data set, shows that the odds of catching drug cheats out-of-competition is significantly smaller than in-competition by a factor of almost 14 to 1.

On average, it takes approximately 619 out-of-competition tests to catch one drug cheat according to the data available.

The research in this report, albeit with its limited data set, casts a significant doubt of the efficacy of out of competition testing. The publicly available evidence strongly

²⁶ The figure would be 31,272 if the "unspecified" 368 tests from the German NADO's statistics were counted

suggests that out of competition drug testing may be disproportionate and not the most efficient use of scarce resources in the campaign for a drug free sport.

The vast majority of sports that were tested throughout Europe in 2009 experienced low levels of anti-doping violations. By contrast, five sports accounted for 49.7% of the 445 total violations: Power lifting (21), Weightlifting (21), Rugby (union and league combined) (25), Cycling (33), and Bodybuilding (121).

It should be noted that the number of positives is likely to be related to the number of tests carried out on each sport. Unfortunately the publicly available dataset did not provide sufficient information to effectively weight the findings according to the number of tests. As such list of sports above should be treated with a degree of caution.

20% of all doping violations reported in the dataset were for unspecified violations. This is far from ideal and needs to be addressed. The breakdown of substances responsible for doping violations from the dataset studied is as follows:

Cannabinoids	18.7%
Anabolic Agents	18.0%
Refusals	16.0%
Stimulants	11.0%
Multiple Code Violations	4.3%

The majority of violations due to the use of Anabolic Agents (65% (52/80)) were concentrated in five sports: Bodybuilding (25/80); Weightlifting (7/80); Fitness (7/80); Power lifting (7/80) and Rugby (union and league combined)(6/80). By contrast, Cannabis use was more widely spread than other substances. Violations for cannabis use occurred in 38 of all 64 sports categories. By comparison, Stimulants come second and are found in 26 sports while Anabolic Agents in just 21.

Concerning the number of violations only involving prohibited substances, the WADA laboratory statistics and our own analysis differ greatly, especially regarding the proportion of anabolic agent violations (64.9% compared to 30.0%) and Cannabis (7.8% vs. 32.0%). There may be a number of legitimate reasons for such a large difference, not least the different datasets, but it is certainly worth further investigation.

There is a wide variation in the efficacy of the testing done by different NADOs, ranging from 16.3 tests per violation in Walloon Belgium to 529.1 tests per violation in Germany.

WADA Annual Reporting for 2009 declares that, worldwide, 758 violations resulted from 277,928 tested samples, a rate of .27%. When the results of the 17 European NADOs with available data in this study (44,744 tested samples and 445 violations) are excluded from the WADA worldwide numbers, we find that the “success” rate drops to .13% (233,184 tested samples resulting in 313 violations). Thus, the rate of violations for athletes from the 17 NADOs in this study is 1% while the rate of violations from the rest of the world is .13%.

Recommendations

Standardized reporting: There is an urgent need for WADA to produce a standardized reporting framework for all Anti Doping Organizations (ADOs) covering on the presentation of publicly available data. This should be developed in

cooperation with stakeholders and independent outside experts. As a minimum it should include:

- A standardized list of sports categories,
- The number of tests conducted in each sport,
- The number of violations in each sport.
- The substances found

This should be broken down to include information on in-competition and out-of-competition as well as for athletes in Registered Testing Pools. Data is also needed on the number of missed tests for athletes within Registered Testing Pools.

Independent research on effectiveness of out of competition testing: As a matter of urgency WADA needs to commission detailed independent research into the effectiveness of out-of-competition drug testing. The results of this report show that out of competition testing to be less effective than in competition testing by a factor of ten.

Guidelines for categorization of substances: WADA should issue guidelines to make sure all ADOs follow the rules of categorization so that violations and substance abuse can be compared.

Analysis of Anabolic Agents vs. Cannabinoid results: The large difference between the published WADA laboratory statistics and this analysis with regards to the percentage of violations that are for anabolic agents and cannabinoids would benefit from further research.

Whereabouts research: There is an urgent need to provide publicly available, detailed statistics on the number of drug tests on athletes subject to the Athlete Whereabouts Requirements to enable independent monitoring of the effectiveness of this controversial policy.

Links to annual reports: Another recommendation would be not only to add links to the NADO websites as WADA already does, but for every NADO and IF listed as having submitted a report to WADA, the agency could also make every annual report it receives available to the public on its website. Such a feature would be invaluable both for the researcher and interested athlete and also show very clearly how and from where WADA obtained the statistics it includes in its “laboratory statistics” and “testing statistics”. This would make the system far more transparent than at present.

Standardize reporting calendar: some NADOs produce an annual report over the course of the financial year rather than the calendar year (such as Britain, Australia, New Zealand, Canada and South Africa) which throws up yet another obstacle if one wishes to compare statistics.

Inclusion of third party testing statistics: A standardized approach is also needed to ensure that all NADOs should publish a detailed breakdown of all the tests conducted and their subsequent results both for the national programme and on behalf of third parties. This is required to ensure that there is no “double counting”.

Best practice: The statistics published by the NADO in the Republic of Ireland represent a model of best practice in Europe, which should be enhanced and developed by WADA as an international standard.

Balance between transparency and data protection: Whilst respecting the principle of data protection WADA needs to work closely with ADOs to ensure that sufficient data is made publicly available to permit independent analysis of anti-doping statistics. Data Protection and privacy legislation should not prevent the publication of anonymized statistics for monitoring purposes.

Review of “Code Compliance”: The notion of Code Compliance needs to be reviewed. It is questionable as to whether countries judged to be Code Compliant by WADA are fully implementing the Code. This fits in with a general feeling that WADA needs to do more to monitor the implementation (as opposed to adoption) of the Code.

Standardize sport categories: A key recommendation would be to standardize the sport categories; currently too many NADOs use different groupings, different terms, or do not indicate which sports were tested in each group even if the test results are given. This makes it difficult to compare annual reports from across Europe.

There is a need for greater research into the proportion of anti-doping violations per sport weighted according to the number of tests per sport. Such data would enhance the allocation of anti-doping resources to those sports where it is most needed and would enhance a more standardized approach to international drug testing.

Links to NADO Annual Reports 2009

Flemish Belgium

- NADO Website: <http://www.dopinglijn.be/>
- Annual Report: <http://www.dopinglijn.be/dopinglijn/cijfers-en-statistieken/>
 - o (2009 test statistics & substances found table)

Walloon Belgium

- NADO Website: http://www.dopage.be/actualites/actualite_substances/
- Annual Report (1): http://www.dopage.be/pdf/dopage_statistiques_controles.pdf
 - o (2009 test statistics table)
- Annual Report (2): http://www.dopage.be/pdf/dopage_statistiques_substances.pdf
 - o (2009 substances found per sport table)

Czech Republic

- NADO Website: <http://www.antidoping.cz/aktuality.php>
- Annual Report (1): http://www.antidoping.cz/statistika_2009.htm
 - o (2009 test statistics table)
- Annual Report (2): http://www.antidoping.cz/dopingove_pripady.htm
 - o (2009 list of athletes caught including substances found)

Denmark

- NADO Website: <http://www.antidoping.dk/>
- Annual Report: http://www.antidoping.dk/Dopingkontrol_i_Danmark/Statistik_2010/Statistik%202009.aspx
(2009 various test statistics)

Finland

- NADO Website: <http://www.antidoping.fi/view.cfm?page=E6A9858A-E534-4A55-AF84-A574CA28A308>
- Annual Report : <http://www.antidoping.fi/view.cfm?page=E832E845-CBDB-4BFA-BE37-344B57410D6D>
 - o (2009 summary of test statistics)

Finland's other annual reports since 2002 are available here:

<http://www.antidoping.fi/view.cfm?page=2B2E4785-659D-4364-9DDD-742AC4F12529>

France

- NADO Website: <http://www.afld.fr/index.php>
- Annual Report (1): http://www.afld.fr/docs/page8_444_bilancontroles2009.pdf
 - o (2009 summary of statistics – the “Analyse des Contrôles” – used in this study)
- Annual Report (2): https://www.afld.fr/docs/ressource297_RA_afld_bd.pdf
 - o (2009 Full Report by the French NADO in pdf format – **not used in this study as it was not available at the time the research was completed**)

France's 2008 report is also available on the website

Germany

- NADO Website: <http://www.nada-bonn.de/>
- Annual Report: http://www.nada-bonn.de/fileadmin/user_upload/nada/Downloads/Dopingbilanzen/NADA_Jahrbuch_2009.pdf
 - o (2009 'Jaresbericht')

Germany's Annual reports from 2008 onwards available here : <http://www.nada-bonn.de/service-information/bilanzen/>

Ireland

- NADO Website: <http://www.irishsportsCouncil.ie/>
- Annual Report: http://www.irishsportsCouncil.ie/Anti-Doping/Resources/Annual_Reports/Annual_Report_2009.pdf
 - o (2009 Annual Report)

Ireland's Annual Reports from 2000 onwards are available here: http://www.irishsportsCouncil.ie/Anti-Doping/Resources/Annual_Reports/Annual_Reports.html

Latvia

- NADO Website: <http://www.antidopings.lv/5>
- Annual Report (1): <http://www.antidopings.lv/informacija/diagrammas/>
 - o (list of athletes caught from 1992 to 2010 and number of tests conducted that year)
- Annual Report (2): <http://www.antidopings.lv/informacija/diagrammas/2009/>
 - o (tables showing the number of tests conducted in and out of competition in 2009)

Both of the above webpages have links to the same anti-doping test statistics for the years 1992 onwards

Luxembourg

- NADO Website: <http://www.alad.lu/>
- Annual Report: <http://www.alad.lu/index.php?lm2=NRDBYVKGQRN>
 - o (Results of all the tests conducted by the NADO in 2009)

The above webpage contains links to other annual reports from 2001

Netherlands

- NADO Website: <http://www.dopingautoriteit.nl/>
- Annual Report: <http://www.dopingautoriteit.nl/media/files/jaarverslagen/Jaarverslag%20Dopingautoriteit%202009.pdf>

- (2009 Dutch NADO's annual report)

The full list of annual reports produced by the Dutch NADO since 2004 can be found here:

<http://www.dopingautoriteit.nl/organisatie/jaarverslagen>

Norway

- NADO Website: <http://www.antidoping.no/>
- Annual Report (1):
<http://www.antidoping.no/sitefiles/1/dokumenter/aarsrapport/aarsrapport09.pdf>
 - (2009 Norwegian Annual Report)
- Annual Report (2):
<http://www.antidoping.no/internett/dopingkontroll/dopingkontroll/antall-prover/>
 - (Table listing the number of tests conducted per sport since 2003)
- Annual Report (3):
<http://www.antidoping.no/internett/dopingkontroll/dopingkontroll/dommer-oversikt/>
 - (Table listing the athletes caught doping since 2007)

All the Norwegian Annual Reports produced since 2003 can be found here:

<http://www.antidoping.no/internett/ressurssider/arsrapport/>

Poland

- NADO Website: <http://www.anty doping.pl/>
- Annual Report: http://www.anty doping.pl/en/download_center/annual_rapports
 - (Polish Annual Report of 2009)

Portugal

- NADO Website: <http://www.idesporto.pt/>
- Annual Report:
<http://www.idesporto.pt/ficheiros/file/ADoP%202009%20Dados%20Estat%EF%BF%BDsticos.pdf>
 - (Portuguese Anti-Doping report/statistics of 2009)

The full list of anti-doping statistics/reports produced by the Portuguese NADO since 2003 can be found here:

<http://www.idesporto.pt/conteudo.aspx?id=77&idMenu=7>

Romania

- NADO Website: <http://www.anad.gov.ro/index.php>
- Annual Report: <http://www.anad.gov.ro/html/ro/statistica2009.php>
 - (Detailed list of Athletes caught 2009)

Anti-Doping statistics compiled by the Romanian NADO since 2006 can be found here:

<http://www.anad.gov.ro/html/ro/rapoarte.php>

Russia

- NADO Website: <http://www.rusada.ru/index?lang=eng>

- Link to Statistics: http://www.rusada.ru/files/annual%20report_eng.pdf
 - o (This is the Russian NADO's full annual report for 2009. **It was not available online at the time this study was written and therefore could not be used**)

Serbia

- NADO Website: <http://www.adas.org.rs/eng/>
- Annual Report (1) : <http://www.adas.org.rs/dokumenti/statistika/dk-eng-2009.pdf>
 - o (This is the full Serbian Annual Report of 2009)
- Annual Report (2):

The list of annual reports produced by the Serbian NADO since 2007 and a list of the athletes tested each year (including their test results) can be found here:

<http://www.adas.org.rs/eng/statistics.php>

Slovakia

- NADO Website: <http://www.antidoping.sk/>
- Annual Report: <http://www.antidoping.sk/?antidoping-ADA-SR=statistika-testovania-2009&ada=149>
 - o (Link to the Slovakian doping control statistics of 2009)

Lists of anti-doping data since 1993 and the 2010 annual report can be found here:

<http://www.antidoping.sk/?antidoping-ADA-SR=statistika-testovania-1993---2008&ada=148>

Switzerland

- NADO Website: <http://www.antidoping.ch/en/>
- Annual Report: (below)

The full list of annual reports produced by Switzerland since 2004 can be found here:

<http://www.antidoping.ch/en/general/downloadcenter/?q=annual>

United Kingdom

- NADO Website: <http://www.ukad.org.uk/>
- Annual Report (1): <http://www.ukad.org.uk/pages/historical-results/>
 - o (List of quarterly anti-doping reports since 2005)
- Annual Report (2): <http://www.ukad.org.uk/violations/>
 - o (List of all rule violations compiled by the NADO since it became operational)

Other Annual Reports

Greece

- NADO Website: <http://www.eskan.gr/index.php?lang=el>
- Link to Annual Reports : <http://www.eskan.gr/pubs.php?cat=2&lang=el>
 - o ('Activity Reports' for 2005,2006 and 2007)

Hungary

- NADO Website: www.antidopping.hu/
- Link to Annual Reports (1):
http://www.antidopping.hu/php/upload/2008_03/30/120687180264243517/bszamolo_v08_1_29165.pdf
 - o (2007 Annual Report from the Hungarian NADO)
- Link to Annual Reports (2):
http://www.antidopping.hu/main.php?Esemeny_Id=N0Fick5OM2ViTG0wc2o5MHJ5Znl4OGRZYXVMNXY2MEZ0ZUJjb1o5OEJaST0=
 - o (This is a list of the Hungarian NADO's activities and recent positive cases)

Italy

- NADO Website: <http://www.coni.it/index.php?id=1>
- Link to Annual Reports: http://www.coni.it/index.php?dati_statistici
 - o (Doping statistics compiled from 1997 to 2007, excluding 2006)

Sweden

- NADO Website: <http://www.rf.se/>
- Link to Statistics (1): <http://www.rf.se/Vi-arbetar-med/Antidoping2/Statistik/>
 - o (General Anti-Doping Statistics since the 1980s)
- Link to Statistics (2): http://www.rf.se/Arbetsrum/Tidningen_Svensk_Idrott/Bestraffningar/
 - o (list of violations)

Spain

- NADO Website(1): <http://www.aea.gob.es/>
- NADO Website(2): <http://www.csd.gob.es/csd/salud>
- Link to Statistics: <http://www.csd.gob.es/csd/salud/lucha-contr-el-dopaje/control-de-dopaje/2Dopaje/02LabConANT/estadisticas-de-resultados-analitic0s/02/>
 - o (Various anti-doping statistics from 1996)

Multiple Infringements

Key

- IC means "In Competition", OC means "Out of Competition"
- (?) means that it is not known if the violation occurred in or out of competition

Baseball

1. Flemish Belgium – Baseball – In Competition – 1 Stimulant & 1 Narcotic detected

Billiards

1. Germany – Billiards & related – In Competition – 1 Stimulant & 1 Cannabinoid detected

Bodybuilding

1. Czech Republic – Bodybuilding – (?) – 3 Anabolic Agents & 1 Diuretic or Masking Agents
2. Czech Republic – Bodybuilding – (?) – 3 Anabolic Agents & 2 Diuretic or Masking Agents + elevated T/E ratio
3. Czech Republic – Bodybuilding – (?) – 3 Anabolic Agents & 2 Diuretic or Masking Agents + elevated T/E ratio
4. Czech Republic – Bodybuilding – (?) – 1 Anabolic Agents & 1 Stimulant & 1 Cannabinoid
5. Czech Republic – Bodybuilding – (?) – 1 Anabolic Agents & 1 Diuretic or Masking Agents + elevated T/E ratio
6. Czech Republic – Bodybuilding – (?) – 4 Anabolic Agents & 2 Diuretic or Masking Agents + elevated T/E ratio
7. Poland – Bodybuilding – (?) – 2 Anabolic Agents & 1 Hormone Antagonist & 1 Cannabinoid
8. Poland – Bodybuilding – (?) – 1 Anabolic Agents & 1 Hormone Antagonist
9. Poland – Bodybuilding – (?) – 1 Anabolic Agents & 1 Hormone Antagonist
10. Romania – Bodybuilding – (?) – 1 Anabolic Agents & 1 Diuretic or Masking Agents

Football

1. Norway – Football – (?) – 1 Anabolic Agent & 1 Hormone

Powerlifting

1. Czech Republic – power lifting – In Competition – 4 Anabolic Agents & 1 Stimulant
2. Germany – Powerlifting – In Competition – 1 Anabolic Agent & 1 Diuretic or Masking Agents

Rugby

1. Poland – Rugby – In Competition – 1 Anabolic Agent & 1 Cannabinoid
2. Poland – Rugby – In Competition – 1 Anabolic Agent & 1 Cannabinoid & 1 Stimulant

Shooting

1. French Belgium – Shooting – (?) – 3 Beta-2 Antagonists & 1 Masking Agent

Watersport

1. French Belgium – Watersport – (?) – 1 Cannabinoid & 1 Anabolic Agent

Unspecified Violations

There are two categories of “unspecified violation”. The first is the Luxembourg-Denmark type where no detail on any case is given and then there is the French and Flemish Belgium type which lists the total number of violations next to the total number of substances found. It gives no details of individual cases or fails to show when an athlete may have tested positive for several different categories of prohibited substances.

Not all of the Flemish and French Belgian results are featured here. That is because the number of “doping practices” matched the number of violations. By contrast, these violations are listed under “unspecified” because one or more violators tested positive for one or more different categories of substance. Indeed, because of the way that the Belgian annual report is compiled, we cannot determine what combination of substances were found in each violation. It is thus best to leave them out of the table than to guess.

Luxembourg & Denmark

There were X n° of violations

- There are 17 “positives” between Luxembourg and Denmark for whom details of the violations are not mentioned in the statistical summaries available on their websites.

Flemish Belgian NADO

- **Bodybuilding:** *There are 34 “doping practices” recorded by the Belgian NADO in Bodybuilding which were listed under “unspecified violations” which included 1 Cannabinoid, 33 Anabolic Agents and 4 Masking agents*
- **Powerlifting:** *There were 3 “doping practices” recorded by the Belgian NADO in Powerlifting which were listed under “unspecified violations” which included 1 Stimulant, 1 Narcotic, 1 Anabolic Agent and 1 Diuretic or Masking Agent.*
- **Kickboxing:** *There were 10 “doping practices” recorded by the Belgian NADO in Kickboxing which were listed under “unspecified violations” which included 2 stimulants, 3 cannabinoids and 6 Anabolic Agents*

French Belgian NADO

- **Bodybuilding:** *There were 11 doping cases recoded which were listed under “unspecified violations” which included 3 Stimulants, 1 Cannabinoid, 4 Anabolic Agents, 1 Beta-2 Antagonist, 7 Masking Agents*
- **Futsal:** *There were 9 doping cases recoded which were listed under “unspecified violations” which included 1 Stimulant, 5 Cannabinoids, 1 Anabolic Agent, 1 Beta-2 Antagonist and 2 Diuretics or Masking Agents*
- **Volleyball:** *There were 2 doping cases recoded which were listed under “unspecified violations” which included 1 Narcotic, 1 Cannabinoid, 1 Beta-2 Antagonist*

Summary

- Anabolic Agents are by far the most used substance
- Cannabinoids are the second most used substance
- Masking Agents come third
- Stimulants are fourth

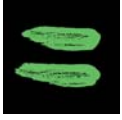
2008 Anti-Doping Organization Statistics

(Submissions received as of October 1st 2009)

International Sport Federations	Reported AAFs	Reported ADRVs
Federation Internationale de Gymnastique (FIG)	4	4
Federation Internationale de Motorcyclisme (FIM)	0	0
Federation Internationale de Natation (FINA)	118	26
Federation Internationale des Luttes (FILA)	12	11
Fédération Internationale Pelote Basque (FIPV)	0	0
International Archery Federation (FITA)	1	1
International Association of Athletics Federations (IAAF)	39	19
International Baseball Federation (IBAF)	2	1
International Canoe Federation (ICF)	9	-
International Cycling Union (UCI)	-	45
International Dragon Boat Federation (IDBF)	0	0
International Equestrian Federation (FEI)	0	0
International Floorball Federation (IFF)	4	1
International Hockey Federation (IHF)	2	1
International Ice Hockey Federation (IIHF)	11	3
International Kendo Federation (FIK)	0	0
International LifeSaving Society (ILS)	0	0
International Orienteering Federation (IOF)	2	0
International Paralympic Committee (IPC)	1	0
International Powerlifting Federation (IPF)	23	9
International Roller Sports Federation (FIRS)	1	0
International Rugby Board (IRB)	15	12
International Sailing Federation (ISAF)	12	5
International Shooting Sport Federation (ISSF)	3	3
International Skating Union (ISU)	0	1
International Tennis Federation (ITF)	14	3
International Volleyball Federation (FIVB)	1	2
Tug of War International Federation (TWIF)	0	0
International Waterski & Wakeboard Federation (IWSF)	0	1
Union International Motonautique	0	0
World Bridge Federation (WBF)	0	0
World Chess Federation (FIDE)	0	0
World Curling Federation (WCF)	0	0
World Draughts Federation (FMJD)	0	0
World Flying Disc Federation (WFDF)	0	0



World Minigolf Sport Federation	0	0
World Ninepin Bowling Association	0	0
World Squash Federation	0	0
World Underwater Federation (CMAS)	6	0
Federation International D'Escrime (FIE)	3	1
International Cricket Council (ICC)	0	0
International Mountaineering and Climbing Federation (UIAA)	0	1
NATIONAL ANTI-DOPING AGENCIES	Reported AAFs	Reported ADRVs
Agence Luxembourgeoise Antidopage	6	3
Anti-Doping Agency of Malaysia	10	4
Anti-Doping Authority the Netherlands	69	30
Anti-Doping Denmark	63	13
Anti-Doping Norway	53	15
Anti-Doping Organization of Pakistan	3	3
Anti-Doping Agency of Serbia	8	8
Anti-Doping Unit Ministry Youth and Sports - Mauritius	0	0
Australian Sports Anti-Doping Authority	23	14
Caribbean Regional Anti-Doping Organization	2	0
Croatian Anti-Doping Agency (CROADA)	2	1
Cyprus Anti-Doping Committee	8	8
Czech Anti-Doping Committee	45	35
Estonian Anti-Doping Agency	4	4
Finnish Anti-Doping Agency (FINADA)	42	8
Irish Sports Council	6	5
Italian Olympic Committee (CONI)	91	159
Japan Anti-Doping Agency (JADA)	10	10
Korea Anti-Doping Agency	11	13
Latvia National Anti-Doping Organization	5	5
National Anti-Doping Commission Barbados	0	0
Nationale Anti-Doping Agentur Austria	15	17
Polish Commission Against Doping in Sport	29	29
Puerto Rico Anti-Doping Organization	1	1
Romanian Anti-Doping Agency	22	22
Tunisian NADO	7	7
UK Sport	39	25
Uruguay National Anti-Doping Agency	2	2
Venezuelan Anti-Doping Commission	7	0



* NOTE: The *Adverse Analytical Findings* (AAF) in this report are not to be confused with adjudicated or sanctioned Anti-Doping Rule Violations (ADRV). "*Adverse Analytical Finding*" is defined in the World Anti-Doping Code as "a report from a laboratory or other WADA-approved entity that, consistent with the *International Standard for Laboratories* and related Technical Documents, identifies in a Sample the presence of a *Prohibited Substance* or its *Metabolites* or *Markers* (including elevated quantities of endogenous substances) or evidence of the Use of a *Prohibited Method*." These figures may not be identical to *Anti-Doping Rule Violations*, as the figures given in this report may contain findings that underwent the Therapeutic Use Exemption (TUE) approval process. In addition, some *Adverse Analytical Findings* may correspond to multiple measurements performed on the same *Athlete*, such as in cases of longitudinal studies on testosterone, and some cases may be pending before the appropriate jurisdictions. *Anti-Doping Rule Violations* listed above may also include violations unrelated to AAFs (e.g. Refusals).

Key:

AAF: Adverse Analytical Finding

ADRV: Anti-Doping Rule Violation

2009 Anti-Doping Organization Activity Summary
Reported by Code Signatory Anti-Doping Organizations

Anti-Doping Organization (International Federations)	Total Adverse Analytical Findings	Total Anti-Doping Rule Violations
Fédération Internationale d'escrime (FIE)	2	2
Fédération Internationale de Football Association (FIFA)	13	3
Fédération Internationale de Natation (FINA)	6	2
Fédération Internationale de Pelote Basque	0	0
Fédération Internationale de Savate	0	0
Fédération Internationale des Lutttes Associees (FILA)	16	15
International Archery Federation (FITA)	1	0
International Badminton Federation (BWF)	0	0
International Baseball Federation (IBAF)	34	10
International Basketball Federation (FIBA)	13	12
International Biathlon Union (IBU)	1	1
International Bobsleigh and Tobogganing Federation	10	3
International Canoe Federation (ICF)	8	1
International Cricket Council (ICC)	0	0
International Cycling Union (UCI)	77	64
International Dance Sport Federation (IDSF)	0	4
International Federation of Bodybuilding and Fitness	26	16
International Federation of Cheerleading (IFC)	0	0
International Federation of Sleddog Sports (IFSS)	0	0
International Federation Sport Climbing (IFSC)	0	0
International Floorball Federation (IFF)	3	0
International Gymnastics Federation (FIG)	3	2
International Handball Federation (IHF)	0	0
International Hockey Federation (FIH)	0	0
International Ice Hockey Federation (IIHF)	7	0
International Judo Federation (IJF)	4	2
International Karate Federation (WKO)	1	0
International Kendo Federation (FIK)	0	0
International Korfball Federation (IKF)	0	0
International Luge Federation (FIL)	0	0
International Mountaineering and Climbing Federation (UIAA)	0	0
International Orienteering Federation (IOF)	0	0
International Paralympic Committee (IPC)	5	3
International Polo Federation (FIP)	0	0
International Powerlifting Federation (IPF)	12	12
International Roller Sports Federation (FIRS)	11	11

International Roller Sports Federation (FIRS)	1	1
International Rowing Federation (FISA)	2	2
International Rugby Board (IRB)	9	4
International Sailing Federation (ISAF)	6	2
International Skating Union (ISU) *	1	0
International Ski Federation (FIS)	5	6
International Ski Mountaineering Federation (ISMF)	0	0
International Surfing Association (ISA)	0	0
International Table Tennis Federation (ITTF)	12	11
International Tennis Federattion (ITF)	10	4
International Triathlon Union (ITU)	11	2
International Volleyball Federation (FIVB)	1	1
International Weightlifting Federation (IWF)	30	30
International Wheelchair and Amputee Sport (IWAS)	Not provided	1
Jeux de la Francophonie 2009 – Beyrouth	0	0
Tug of War International Federation (TWIF)	0	0
World Chess Federation (FIDE)	0	0
World Curling Federation (WCF)	0	0
World MiniGolf Sport Federation	0	0
World Ninepin Bowling Association (WNBA)	0	0
World Squash Federation (WSF)	0	0
World Taekwondo Federation (WTF)	0	1
World Underwater Federation (CMAS)	10	1
Anti-Doping Organization (National Anti-Doping	Total Adverse Analytical Findings	Total Anti- Doping Rule Violations
Anti-Doping Organization of Pakistan	0	0
Anti-Doping Denmark	30	14
Anti-Doping Norway	26	15
Anti-Doping Singapore	0	0
Anti-Doping Switzerland	Not provided	24
Armenian NADO (ARMADO)	0	0
Australian Sports Anti-Doping Authority (ASADA)	33	42
Belarus NADO	4	5
Bermuda Council for Drug-Free Sport	1	0
Brazilian Anti-Doping Agency	11	Not provided
Canadian Centre for Ethics in Sport (CCES)	46	31
Chinese Anti-Doping Agency (CHINADA)	25	15
Comision AntiDopaje de la Republica Bolivariana de Venezuela	12	12
Comision Nacional de Control de Dopaje Chile	1	1
Cuban NADO	1	1
Estonian Anti-Doping Agency	2	2

Finnish Anti-Doping Agency (FINADA)	10	6
Georgian Anti-Doping Agency	1	0
Health and Doping Control and Supervision Committee, High Council for Sports - Spain (CCSSD)	77	47
Hong Kong Anti-Doping Committee	0	0
Irish Sports Council	7	3
Jamaica Anti-Doping Commission (JADCO)	7	7
Japan Anti-Doping Agency (JADA)	4	3
Korean Anti-Doping Agency (KADA)	16	17
L'Agence Nationale Antidopage Tunisie	26	7
Maldives National Anti-Doping Agency (MANDANA)	0	0
Mauritian NADO	2	2
Montenegro National Olympic Committee	0	0
Nationale Anti-Doping Agentur Austria GmbH (NADA Austria)	12	16
National Anti-Doping Agency Germany	39	35
ONAD Communauté française de Belgique	91	65
Polish Commission Against Doping in Sport	34	37
Puerto Rico NADO	1	1
Qatar Anti-Doping Commission	9	6
Romanian National Anti-Doping Agency	35	39
Saudi Arabian Anti Doping Committee	19	20
Slovak Anti-Doping Agency	11	7
South African Institute for Drug-Free Sport (SAIDS)	26	18
United Kingdom Anti-Doping (UKAD)	25	17
United States Anti-Doping Agency (USADA)	92	14
Uruguayan NADO	0	0

* July 1, 2009-June 30, 2010

** NOTE: The Adverse Analytical Findings (AAF) in this report are not to be confused with adjudicated or sanctioned Anti-Doping Rule Violations (ADRV). "Adverse Analytical Finding" is defined in the World Anti-Doping Code as "a report from a laboratory or other WADA-approved entity that, consistent with the International Standard for Laboratories and related Technical Documents, identifies in a Sample the presence of a Prohibited Substance or its Metabolites or Markers (including elevated quantities of endogenous substances) or evidence of the Use of a Prohibited Method." These figures may not be identical to Anti-Doping Rule Violations, as the figures given in this report may contain findings that underwent the Therapeutic Use Exemption (TUE) approval process. In addition, some Adverse Analytical Findings may correspond to multiple measurements performed on the same Athlete, such as in cases of longitudinal studies on testosterone, and some cases may be pending before the appropriate jurisdictions. Anti-Doping Rule Violations listed above may also include violations unrelated to AAFs (e.g. Refusals).

MATTER FOR WADA EXECUTIVE COMMITTEE / FOUNDATION BOARD

RECOMMENDATION / DECISION

DEPARTMENT/ AREA: STANDARDS AND HARMONIZATION
SUBJECT: CODE COMPLIANCE AND IMPLEMENTATION REPORT
DIRECTOR: RUNE ANDERSEN

1. **INTRODUCTION AND BACKGROUND**

Article 23.4 of the World Anti-Doping Code ("the Code") states:

"23.4 Monitoring Compliance with the Code

- 23.4.1 *Compliance with the Code shall be monitored by WADA or as otherwise agreed by WADA.*
- 23.4.2 *To facilitate monitoring, each Signatory shall report to WADA on its compliance with the Code every second year and shall explain reasons for noncompliance.*
- 23.4.3 *WADA shall consider explanations for non-compliance and, in extraordinary situations, may recommend to the International Olympic Committee, International Paralympic Committee, International Federations, and Major Event Organizations that they provisionally excuse the non-compliance.*
- 23.4.4 *WADA shall, after dialogue with the subject organization, make reports on compliance to the International Olympic Committee, the International Paralympic Committee, International Federations, and Major Event Organizations. These reports shall also be made available to the public."*

Members are reminded that in order to help signatories fulfill their obligations under the Code, WADA has not only monitored the situation of each signatory, but also constantly assisted signatories in ensuring their anti-doping regulations are drafted in line with the Code and that these regulations are subsequently enforced in a Code compliant way.

At the September 2007 Executive Committee meeting a first interim Code compliance report was tabled to provide an overview of the level of Code compliance. This first interim report indicated that the majority of Summer and Winter Olympic International Sports Federations (IFs), as well as Recognized Federations had been successful in establishing anti-doping rules

in line with the Code; a major step in achieving Code compliance. After this step, the major task for WADA has been to ensure that these signatories are carrying out their anti-doping programs in accordance with their Code-compliant rules, and to report accordingly.

Based on the same first interim report, more work was required by many National Anti-Doping Organizations (NADOs), National Olympic Committees (NOCs) and non-Olympic/non-Recognized Federations to achieve compliance.

At the November 2007 Executive Committee meeting, the Code Compliance Monitoring Plan developed by WADA Management was approved. In light of this plan, WADA is required to fully monitor compliance of Olympic IFs, IOC-recognized IFs, non-IOC-recognized GAISF members, and NADOs. Pursuant to the same plan, WADA must review the rules of NOCs, Multi-Sport Organizations and Events, as well as the IFs which are not part of the aforementioned categories, in order to ensure that they are in line with the Code. It has to monitor their answers provided to the on-line survey on Code compliance, but does not fully monitor their compliance.

At the May 2008 Executive Committee and Foundation Board meetings, a second interim Code compliance report was tabled in order to provide an overview of the situation and the planned approach for the ensuing months. This second interim Code compliance report indicated that additional NADOs, NOCs and non-Olympic/non-Recognized Federations had been successful in establishing anti-doping rules in line with the Code, but more work was still required in this respect.

At the September 2008 Executive Committee meeting a third interim Code compliance report provided an overview of the level of Code compliance and the planned approach for the ensuing months. This third interim Code compliance report showed general progress for NADOs, NOCs and non-Olympic/non-Recognized Federations, but also showed that more work was still required with some of these signatories.

During the same meeting, a new Code Compliance Assistance Strategy developed by WADA Management, to be effective only for the present 2008 Code compliance report, was approved. In particular, it was decided that:

- Those NOCs and NADOs that are part of a RADO structure are deemed compliant or provisionally compliant, provided they have entirely committed to their respective RADO and their operations.
- As for the application of article 23.4.3 of the Code, in order to identify the “extraordinary situations”, WADA should take into consideration the economic and political situation as well as the sports’ records and history of each country.
- For Code compliance purposes, any IF, NADO or NOC acting as a NADO shall have within its rules, provisions in line with the Code and be implementing these rules in practice in the following fields:- Anti-Doping Rule Violations, Sanctions, Right for WADA to appeal, Out-of-Competition Testing, respect of the International Standards.

This Code compliance report is the first of its kind since the establishment of WADA, and the acceptance of the Code. The next final report is intended to be presented in November 2010, and will be anticipated by interim reports that will be regularly tabled in order to provide a continuous update on the situation at each Executive Committee and Foundation Board meetings.

The last update of the present report was done on 31 October 2008.

2. RECENT ACTIVITY

Following the acceptance of the Code, the process that every signatory needs to undergo in order to become Code-compliant can be divided in two steps.

The first step is the implementation of the Code; each signatory needs to amend its rules and policies in order to include the mandatory articles and principles of the Code.

The second step is the enforcement of the anti-doping regulations; each signatory needs to enforce its anti-doping rules and policies in accordance with the Code.

1. Implementation

As for the first step, in November 2007, Management made an overview of each signatory's specific situation, in order to identify those who needed assistance in drafting anti-doping regulations in line with the Code.

In December 2007/January 2008, Management sent more than 300 letters to signatories (in particular, more than 190 letters were sent to NOCs and more than 80 letters were sent to NADOs) asking them to submit their anti-doping rules for review. Models of Best Practice were attached to these letters, in order to provide the signatories with a useful tool to draft rules in line with the Code. Management constantly followed up these letters by phone and email.

In April/May 2008, Management again sent more than 250 letters to signatories, asking them to submit the first or revised drafts of their anti-doping rules for review. Models of Best Practice were also attached to these letters. Again, Management constantly followed up these letters by phone and email.

In September 2008, Management sent more than 200 letters to signatories asking them to submit the first or revised drafts of their anti-doping rules for review. Models of Best Practice were also attached to these letters. Once again, Management constantly followed up these letters by phone and email.

WADA Regional Offices have been heavily involved in this activity, in order to use their internal knowledge but also to provide signatories with an additional contact in case assistance was needed.

The RADO structures/Board members were also involved in this activity, in order to provide the signatories with the best and most complete assistance in this exercise.

The WADA Education and Communications Departments cooperated with the Standards and Harmonization (S&H) Department in order to focus the signatories' attention on their obligation to adopt anti-doping rules or to amend their existing rules in order to include the mandatory articles and principles of the Code.

Among other meetings in which signatories were reminded of their obligation to be Code compliant include the EOC General Assembly held in Valencia from 30 November to 1 December 2007; the Seminar of Secretaries General of African NOCs held in Cairo from 12-14 December 2007; the IF and NADO Symposium held in Lausanne on 1 and 2 April 2008; the ANOC General Assembly held in Beijing from 7-9 April 2008; the Workshop on Code Compliance for Latin American countries held in Mexico City on 14-15 April 2008; the EOC Workshop held in Sorrento from 22-24 May 2008; and the

Sportaccord Convention held in Athens from 2-6 June 2008, as well as a number of RADO meetings held in 2007 and 2008 should be mentioned.

WADA also sent general reminders about Code compliance through regional organizations ANOC, ANOCA, ODEPA and OCA.

Following our request for rules, many signatories acknowledged the absence of anti-doping rules within their regulations. The Model Rules provided by WADA and the assistance provided by WADA Management allowed a number of signatories to adopt anti-doping rules within a reasonable time.

Since January 2008, we have received a considerable number of anti-doping rules for review; in the first ten months of 2008, more than 180 anti-doping rules were transmitted to us.

The reviewing process has been a multi-step activity. Following the review of the first draft of rules, in about 90% of cases we have suggested changes to be made in order to have rules in line with the Code. In several cases, upon receiving a copy of the second draft, further suggestions regarding amendments were required.

All signatories who submitted rules or needed to amend them were encouraged by WADA to accept guidance and assistance in this exercise. Therefore, WADA Management was constantly requested to assist signatories in drafting their new rules or in amending the existing rules.

Since February 2008, we have been using an external law firm based in Montreal but operating under Management's coordination. The collaboration with this law firm has allowed us to guarantee the independent nature of the rules reviewing process.

2. Enforcement

As for the enforcement of the anti-doping regulations, we have constantly developed and updated our WADA-Logic Code Compliance Monitoring System. This is an online mechanism for signatories to report back to WADA on their compliance with the Code, in particular concerning the enforcement of the anti-doping regulations. The system is easy to use, time efficient and has enabled us to obtain an overview of the global situation among signatories.

After consulting us, UNESCO has recently decided to create a similar questionnaire in order to monitor the situation of the Member States that have ratified the International Convention against Doping in Sport.

We formally requested on several occasions that signatories complete this on-line survey. The WADA S&H Department, in cooperation with the Education and Communications Departments, Regional Offices and RADO structures/Board Members, constantly provided assistance to all signatories in this respect.

Once the survey was completed, we monitored the results, asked signatories for clarifications if necessary, and assisted them in modifying those policies that were not Code-compliant.

WADA is already working, in cooperation with UNESCO, on the future updates to the system in the light of the next Code compliance exercise.

In order to monitor the enforcement of the anti-doping rules in a Code-compliant way, we also analyzed the testing activity performed by signatories, in particular the Out-of-Competition testing (OOCT) activity, and analyzed the legal application of the rules with focus on the results management processes.

3. STATUS

The situation of each specific group of signatories whose compliance has to be fully monitored by WADA can be summarized as follows:

- **Summer and Winter Olympic IFs**

- 1) *Implementation of the World Anti-Doping Code*

All these Federations with the exception of Volleyball (FIVB) have anti-doping rules that WADA has already declared to be in line with the Code.

As for Volleyball (FIVB), WADA already received the first two drafts of its anti-doping rules and suggested that Volleyball (FIVB) amend certain provisions. In September 2008, taking into account the upcoming entrance in force of the revised Code, Volleyball (FIVB) submitted to WADA a new version of its rules, drafted in the light of the revised Code. WADA has reviewed these rules and considered that they are in line with the revised Code. Taking into account the present circumstances and in particular the consideration that Volleyball (FIVB) has adopted rules in line with the revised Code, WADA considers that the present case cannot be considered a case of non-compliance from the implementation point of view.

- 2) *Enforcement of the anti-doping rules*

WADA has requested all Federations provide evidence that they are conducting a consistent Out-of-Competition testing program. Most of the Federations have responded to this request. WADA has also based its assessment on its own knowledge of the testing activity conducted by signatories and on other available information.

As of today, the following Federations appear not to have yet a consistent Out-of-Competition Testing program in place: Gymnastics (FIG), Wrestling (FILA), Volleyball (FIVB), Handball (IHF) and Modern Pentathlon (UIPM).

On 8 October 2008, WADA addressed formal correspondence to each of these Federations asking them to provide evidence that could cause WADA to change its assessment, but since then has not received any information justifying the exclusion of any Federation from this category.

WADA recommends to the Foundation Board that for the current Code-compliance exercise, these cases be considered as cases of non-compliance, taking into account the consideration that the establishment of a consistent Out-of-Competition testing program is a compulsory requirement for IFs since the entrance in force of the Code on 1 January 2004. WADA will keep assisting and providing assistance to these Federations in the upcoming months in order to help them in establishing a consistent program.

Boxing (AIBA), Equestrian (FEI), Basketball (FIBA), Bobsleigh and Tobogganing (FIBT), Ice Hockey (IIHF), Shooting (ISSF), Table Tennis (ITTF) and Curling (WCF) have implemented a limited program only in the last months of 2008, following WADA's correspondence addressed to them in this respect on 8 October 2008. Taking into account the consideration that these Federations are planning to establish a consistent program in 2009, WADA considers that these cases should not be seen as cases of non-compliance. We will keep providing assistance and guidance in the upcoming months to these Federations.

- **IOC Recognized IFs**

- 1) *Implementation of the World Anti-Doping Code*

All these Federations except for Bridge (WBF) have anti-doping rules that WADA has already declared to be in line with the Code.

Bridge (WBF) recently submitted to WADA a new draft of its rules, which includes provisions in line with the Code in the five fields (Anti-Doping Rule Violations, Sanctions, Right for WADA to appeal, Out-of-Competition Testing, respect of the International Standards) identified by the Executive Committee at its meeting on 20 September 2008 (see chapter 1 above). Following WADA's observations and suggestions, Bridge (WBF) has provided WADA with full evidence it is willing to fully cooperate with WADA in order to adopt rules fully in line with the revised Code.

- 2) *Enforcement of the anti-doping rules*

WADA has requested all Federations to provide evidence that they are conducting a consistent Out-of-Competition testing program. Most of the Federations have responded to this request. WADA has also based its assessment on its own knowledge of the testing activity conducted by signatories and on other available information.

As of today, the following Federations appear not to have yet a consistent Out-of-Competition Testing program in place: Air Sports (FAI), Bandy (FIB), Chess (FIDE), Motorcycling (FIM), Polo (FIP), Bowling (FIQ), Roller Sports (FIRS), Cricket (ICC), Sumo (IFS), Surfing (ISA), Water Ski (IWSF), Wushu (IWUF), Tug of War (TWIF), Mountaineering and Climbing (UIAA), Bridge (WBF) and Billiards Sports (WCBS).

On 8 October 2008 WADA addressed formal correspondence to each of these Federations asking them to provide evidence that could cause WADA to change its assessment, but since then has not received any information justifying the exclusion of any Federation from this category.

WADA recommends to the Foundation Board that for the current Code-compliance exercise these cases be considered as cases of non-compliance, taking into account the consideration that the establishment of a consistent Out-of-Competition testing program is a compulsory requirement for IFs since the entrance in force of the Code on 1 January 2004. WADA will keep assisting and providing assistance to these Federations in the upcoming months in order to help them in establishing a consistent program.

Boules (CMSB), Pelota (FIPV), Golf (IGF), Life Saving (ILS), Powerboating (UIM) and Karate (WKF) have implemented a limited program only in the last months of 2008. Taking into account the consideration that these Federations are planning to establish a consistent program in 2009, WADA considers that these cases cannot be seen as cases of non-compliance. We will keep providing assistance and guidance in the upcoming months to these Federations.

- **GAISF IFs without IOC Recognition status**

- 1) *Implementation of the World Anti-Doping Code*

All these Federations except for Sambo (FIAS), Casting (ICSF), Go (IGF) and Sepaktakraw (ISTAF) have anti-doping rules that WADA has already declared to be in line with the Code.

Sambo (FIAS), Casting (ICSF), Go (IGF) and Sepaktakraw (ISTAF) have submitted their rules to WADA and WADA suggested that they amend certain provisions. The last version of the drafts submitted by Sambo (FIAS) and Sepaktakraw (ISTAF) include provisions in line with the Code in the five fields (Anti-Doping Rule Violations, Sanctions, Right for WADA to appeal, Out-of-Competition Testing, respect of the International Standards) identified by the Executive Committee at its meeting on 20 September 2008 (see chapter 1 above).

Casting (ICSF) and Go (IGF) have provided WADA with evidence that they are willing to cooperate with WADA in order to adopt rules in line with the revised Code.

Therefore, WADA recommends to the Foundation Board that for the present Code compliance exercise these cases not be considered cases of non-compliance, taking into account the evidence of the progress towards compliance.

- 2) *Enforcement of the anti-doping rules*

WADA has requested all Federations to provide evidence that they are conducting a consistent OOC program. Most of the Federations have responded to this request. WADA has also based its assessment on its own knowledge of the testing activity conducted by signatories and on other available information.

As of today, the following Federations appear not to have yet a consistent Out-of-Competition Testing program in place: Angling (CIPS), Sambo (FIAS), Kendo (FIK), Draughts (FMJD), Aikido (IAF), Casting (ICSF), Dragon Boat (IDBF), Fistball (IFA), American Football (IFAF), Muaythai (IFMA), Sleddog (IFSS), Go (IGF), Sepaktakraw (ISTAF), Ju-Jitsu (JJIF), Darts (WDF) and Flying Disc (WFDF).

On 8 October 2008 WADA addressed formal correspondence to each of these Federations asking them to provide evidence that could cause WADA to change its assessment, but since then has not received any information justifying the exclusion of any Federation from this category.

WADA recommends to the Foundation Board that for the current Code-compliance exercise these cases be considered as cases of non-compliance, taking into account the consideration that the establishment of a consistent Out-of-Competition testing program is a compulsory requirement for IFs since the entrance in force of the Code on 1 January 2004. WADA will keep assisting and

providing assistance to these Federations in the upcoming months in order to help them in establishing a consistent program.

Kickboxing (WAKO) and Minigolf (WMF) have implemented a limited program only in the last months of 2008, following WADA's correspondence addressed to them in this respect on 8 October 2008. Taking into account the consideration that these Federations are planning to establish a consistent program in 2009, WADA considers that these cases cannot be seen as cases of non-compliance. We will keep providing assistance and guidance in the upcoming months to these Federations.

- **NADOs**

Pursuant to the Code Compliance Monitoring Plan, we are monitoring compliance of NADOs. This category includes not only the formal NADOs but also the NOCs that act as NADOs in those countries where an official NADO has not yet been established.

As for those countries which are RADO members (12 members in Europe, 22 in the Americas, 37 in Asia, 45 in Africa and 6 in Oceania), following the decision adopted by the Executive Committee at its meeting of 20 September (see chapter 1 above) and valid only for the present Code compliance exercise, NADOs and NOCs acting as NADOs are deemed compliant or provisionally compliant, provided they have entirely committed to the RADOs and their operations.

However, particular mention should be made of the case of the Russian NADO, taking into consideration the size and the sports records of this country, which has joined the Eastern European RADO.

A new NADO has been recently created in Russia and has formally accepted the Code in March 2008. As of today, WADA has not yet received copy of the English/French translation of the anti-doping rules adopted by this signatory, which in any case is working closely with WADA's management and program development staff in order to achieve full compliance within a reasonable time.

WADA is also aware of several problems related to the enforcement of the domestic Russian legislation in the anti-doping field, namely the impossibility for foreign DCOs to operate within the Russian territory, as well as the difficulties in allowing cross-border transportation of samples, transporting samples inside the Russian territory, importing and exporting doping control equipment. In the upcoming months, WADA will keep providing assistance and guidance to this signatory. In the light of the above-mentioned concerns, WADA Management considers that for the present Code compliance exercise, the Russian NADO should be considered non-compliant.

- 1) *Implementation of the World Anti-Doping Code*

As for the non-RADO members, the following NADOs (or NOCs acting as NADOs) have rules in line with the Code or at least rules that include provisions in line with the Code in the five fields identified by the Executive Committee at its meeting on 20 September 2008 (see chapter 1 above): American Samoa, Aruba, Australia, Bermuda, Brazil, Canada, China, Croatia, Czech Republic, Denmark, Dominican Republic, Ecuador, Finland, Ghana, Great Britain, India, Ireland, Italy, Japan, Korea (Republic of), Liechtenstein, Luxembourg, Malta, Netherlands, New Zealand, Nigeria, Norway, Puerto Rico, Romania, Slovakia, Slovenia, Sweden, Switzerland, USA and Venezuela.

The NADOs which do not have rules fully in line with the Code or at least provisions in line with the Code in the five fields identified by the Executive Committee at its meeting on 20 September 2008 can be divided into three groups.

First Group

The first group includes those NADOs (or NOCs acting as NADOs) that do not yet have rules in line with the Code but provided WADA with full evidence that they are in the process of adopting rules in line with the revised Code. In many cases, legislative amendments are needed and are the reason of the delay in the process.

The NADOs (or NOCs acting as NADOs) that are included in this group are namely: Argentina, Austria, the French community of Belgium, Chile, Cuba, Cyprus, Estonia, France, Germany, Greece, Hungary, Iceland, Jamaica, Latvia, Mexico, Monaco, Paraguay, Poland, Portugal, Spain and Uruguay.

On 8 October 2008, WADA addressed formal correspondence to each of these NADOs asking them to provide evidence that could cause WADA to change its assessment, but has not received any information justifying the exclusion of any NADO from this category.

WADA suggests to the Foundation Board that for the current Code-compliance exercise these cases not be considered cases of non-compliance, taking into account the evidence of the progress towards compliance.

In the upcoming months, WADA will keep providing guidance to all the NADOs which are part of this group, in order to assist them in adopting rules in line with the revised Code and in enforcing these rules in a Code-compliant way. These signatories will be asked to provide WADA with evidence of their compliance or their further progress towards compliance within the first months of 2009. In May 2009, WADA will report to Foundation Board and Executive Committee on the status of these NADOs.

Second Group

The second group includes those NADOs (or NOCs acting as NADOs) that do not yet have rules in line with the Code but whose non-compliance can be excused in the light of Code article 23.4.3. In this respect, as already mentioned at chapter 1, the Executive Committee had decided at its meeting of 20 September 2008 that in order to identify the "extraordinary situations" mentioned at Code article 23.4.3 WADA should take into consideration the economic and political situation as well as the sports' records and history of each country.

The NADOs (or NOCs acting as NADOs) that are included in this group are namely: British Virgin Islands, Gambia, Guam, Haiti, Hong Kong, Kiribati, Liberia, Marshall Islands, Mauritania, Micronesia, Nauru, Netherlands Antilles, Palau, Rwanda, Sierra Leone, Solomon Islands, Somalia, Tuvalu and US Virgin Islands.

WADA recommends to the Foundation Board that for the current Code-compliance exercise, these cases not be considered cases of non-compliance, in the light of Code article 23.4.3.

In the upcoming months, WADA will keep providing guidance to all the NADOs which are part of this group, in order to assist them in adopting rules in line with the revised Code and in enforcing these rules in a Code-compliant way.

Third Group

The third group includes those NADOs (or NOCs acting as NADOs) that do not yet have rules in line with the Code and did not provide WADA with full evidence that they are in the process of adopting rules in line with the revised Code. These countries are: Bolivia, Bulgaria, the city of Brussels-Joint Communities Commission¹, Israel, Korea (Democratic Republic of), Lithuania, Peru, San Marino and Chinese Taipei.

WADA recommends to the Foundation Board that for the current Code-compliance exercise these cases be considered cases of non-compliance, taking into account the lack of evidence of any progress towards compliance.

- The cases of Andorra, the German community in Belgium, and Turkey:

As for Andorra, WADA has received information about the existence of a NADO independent from the NOC. This entity has provided WADA with a copy of its anti-doping rules but has not yet formally accepted the Code, despite several requests in this respect. The local NOC has not been acting as a NADO taking into consideration the existence of this entity. Therefore, WADA recommends that the Andorran anti-doping system be deemed non-compliant with the Code.

As for the German community acting as NADO in Belgium, this entity has neither formally accepted the Code nor sent its rules to WADA, despite several requests from WADA in this respect. The Belgian NOC has not been acting as a NADO taking into consideration the existence of this entity. Therefore, WADA recommends that the Belgian anti-doping system be deemed non-compliant with the Code, as far as the German community is concerned.

As for Turkey, a NADO was previously established and formally accepted the Code on 9 October 2003 but since then this entity never responded to WADA's correspondence and telephone calls. The Turkish NOC and the WADA accredited laboratory have not been able to assist WADA in establishing a contact with this NADO. In the light of the present circumstances, WADA's assessment is that the entity that formally accepted the Code in 2003 is no longer operational. The Turkish NOC, which has adopted NOC rules in line with the Code, has never been acting as a NADO taking into consideration the previous existence of the NADO. In the light of the present circumstances, WADA recommends that the Foundation Board acknowledges the fact that the Turkish NADO that had formally accepted the Code is deemed to be non-operational anymore and declares that the Turkish anti-doping system is deemed to be non-compliant with the Code.

In the upcoming months, WADA will keep assisting and providing guidance to all the NADOs which are part of this group and are deemed to be non-compliant in the present exercise, in order to ensure that they adopt rules in line with the revised Code and that they enforce these rules in a Code-compliant way.

¹ Belgium has four NADOs, namely the Flemish, French and German communities, as well as the city of Brussels-Joint Communities Commission.

2) *Enforcement of the anti-doping rules*

WADA acknowledges that those NADOs which have rules in line with the Code conduct in and out-of-competition testing on a regular basis.

Particular mention should be made of the case of the Flemish community, which has formally accepted the Code and adopted rules that WADA considered to be in line with the Code. In the past years and months, WADA's Legal Department has considered that several decisions rendered by the Flemish community acting as NADO were not in line with the Code. In addition, the practical application of the rules showed that WADA's right to appeal was not clearly guaranteed for all cases. Finally, the way WADA has been notified of the decisions adopted by the Flemish authorities was not in line with the Code. In this respect, specific correspondence has been addressed to the Flemish community on 21 February 2008 and 3 October 2008.

In the past weeks, the Flemish community has provided WADA with full evidence that it is in the process of working in order to enforce its rules in a Code-compliant way. In the light of the present circumstances, WADA suggests to the Foundation Board that for the current Code-compliance exercise this case not be considered as a case of non-compliance, taking into account the evidence of the progress towards compliance.

In the upcoming months, WADA will continue assisting and providing guidance to the Flemish NADO in order to ensure that the enforcement of the rules is conducted in a Code-compliant way.

4. CONCLUSIONS AND RECOMMENDATIONS

WADA acknowledges the general progress towards Code compliance and congratulates the signatories for their efforts in this respect.

In the upcoming months, WADA will keep providing assistance and guidance to all signatories, in particular to those who are non-compliant with the 2003 Code, in order to help them in becoming compliant with the revised Code which will enter in force on 1 January 2009.

In accordance with Code articles 23.4 of the Code, WADA recommends that the Foundation Board declare non-compliant the following signatories:

1) **International Federations**

- Olympic IFs: Gymnastics (FIG), Wrestling (FILA), Volleyball (FIVB), Handball (IHF) and Modern Pentathlon (UIPM) for not having show evidence of the establishment of a consistent Out-of-Competition program;
- IOC recognized IFs: Air Sports (FAI), Bandy (FIB), Chess (FIDE), Motorcycling (FIM), Polo (FIP), Bowling (FIQ), Roller Sports (FIRS), Cricket (ICC), Sumo (IFS), Surfing (ISA), Water Ski (IWSF), Wushu (IWUF), Tug of War (TWIF), Mountaineering and Climbing (UIAA), Bridge (WBF) and Billiards Sports (WCBS) for not having show evidence of the establishment of a consistent Out-of-Competition program;

- Non-IOC recognized GAISF members: Angling (CIPS), Sambo (FIAS), Kendo (FIK), Draughts (FMJD), Aikido (IAF), Casting (ICSF), Dragon Boat (IDBF), Fistball (IFA), American Football (IFAF), Muaythai (IFMA), Sleddog (IFSS), Go (IGF), Sepaktakraw (ISTAF), Ju-Jitsu (JJIF), Darts (WDF) and Flying Disc (WFDF) for not having show evidence of the establishment of a consistent Out-of-Competition program;

2) **NADOs**

- The Russian NADO for not having adopted rules in line with the Code, not having show evidence that it is progressing towards compliance and not having adopted any concrete measure in order to solve the problems created by the enforcement of the domestic Russian legislation in the anti-doping field as specified above.
- The following NADOs (or the NOCs acting as NADOs): Bolivia, Bulgaria, the city of Brussels-Joint Communities Commission, Israel, Korea (Democratic Republic of), Lithuania, Peru, San Marino and Chinese Taipei, for not having adopted rules in line with the Code and not having show evidence that they are progressing towards compliance.

3) **Anti-doping systems**

- The following anti-doping systems: Andorra, Belgium (German community) and Turkey, as in these countries there is not a fully established NADO or an organization acting as NADO which is operational, has accepted the Code and applies NADO rules in line with the Code.

**2009 Adverse Analytical Findings and Atypical Findings
Reported by Accredited Laboratories**

Overview of Results

Table A All Sports

Differentiation between Olympic and Non-Olympic Sports	A Samples Analyzed	A Samples Adverse Analytical Findings ^{1,3}		A Samples Atypical Findings ^{2,3}		A Samples Total Findings ³	
		(%)	(%)	(%)	(%)	(%)	(%)
Olympic Sports	187,029	1,674	(0.90%)	2,024	(1.08%)	3,698	(1.98%)
Non-Olympic Sports	90,899	1,417	(1.56%)	495	(0.54%)	1,912	(2.10%)
TOTAL	277,928	3,091	(1.11%)	2,519	(0.91%)	5,610	(2.02%)

¹ **The Adverse Analytical Findings (AAF) in this report are not to be confused with adjudicated or sanctioned Anti-Doping Rule Violations (ADRV).** "Adverse Analytical Finding" is defined in the World Anti-Doping Code as "a report from a laboratory or other WADA- approved entity that, consistent with the *International Standard for Laboratories* and related Technical Documents, identifies in a *Sample* the presence of a *Prohibited Substance* or its *Metabolites* or *Markers* (including elevated quantities of endogenous substances) or evidence of the *Use of a Prohibited Method*." These figures may not be identical to sanctioned cases, as the figures given in this report may contain findings that underwent the Therapeutic Use Exemption (TUE) approval process.

² **The Atypical Findings (ATF) in this report are not to be confused with adjudicated or sanctioned Anti-Doping Rule Violations (ADRV).** "Atypical Finding" is defined in the World Anti-Doping Code as "a report from a laboratory or other WADA-approved entity which requires further investigation as provided by the *International Standard for Laboratories* or related Technical Documents prior to the determination of an *Adverse Analytical Finding*". *Atypical Findings* may correspond to multiple measurements performed on the same *Athlete*, such as in cases of longitudinal studies on testosterone.

³ Includes *Adverse Analytical Findings* and *Atypical Findings*

2009 Adverse Analytical Findings and Atypical Findings Reported by Accredited Laboratories

Comparison of Years 2003 to 2009

Table A1 Olympic and Non-Olympic Statistics

Differentiation between Olympic and Non-Olympic Sports	2003 A Samples Analyzed	2004 A Samples Analyzed	2005 A Samples Analyzed	2006 A Samples Analyzed	2007 A Samples Analyzed	2008 A Samples Analyzed	2009 A Samples Analyzed	A Samples Analyzed 2009 vs 2008
Olympic Sports	113,559	128,591	139,836	156,866	174,483	202,067	187,029	-7.4%
Non-Olympic Sports	37,651	40,596	43,501	41,277	49,415	72,548	90,899	25.3%
TOTAL	151,210	169,187	183,337	198,143	223,898	274,615	277,928	1.2%

Differentiation between Olympic and Non-Olympic Sports	2003 AAFs ^{1,2}	2004 AAFs ^{1,2}	2005 AAFs ^{1,2}	2006 AAFs ^{1,2}	2007 AAFs ^{1,2}	2008		2009		Total Findings ³ 2009 vs 2008
						AAFs ¹	Total Findings ³	AAFs ¹	Total Findings ³	
Olympic Sports	1,707	2,145	2,958	2,915	3,375	1,974	3,715	1,674	3,698	-0.5%
Non-Olympic Sports	740	764	951	972	1,027	982	1,346	1,417	1,912	42.1%
TOTAL	2,447	2,909	3,909	3,887	4,402	2,956	5,061	3,091	5,610	10.8%

Differentiation between Olympic and Non-Olympic Sports	2003 % Total Findings ³	2004 % Total Findings ³	2005 % Total Findings ³	2006 % Total Findings ³	2007 % Total Findings ³	2008		2009		% Total Findings ³ 2009 vs 2008
						% AAFs ¹	% Total Findings ³	% AAFs ¹	% Total Findings ³	
Olympic Sports	1.50	1.67	2.12	1.86	1.93	0.98	1.84	0.90	1.98	7.5%
Non-Olympic Sports	1.97	1.88	2.19	2.35	2.08	1.35	1.86	1.56	2.10	13.1%
Overall	1.62	1.72	2.13	1.96	1.97	1.08	1.84	1.11	2.02	9.7%

¹ The *Adverse Analytical Findings* (AAF) in this report are not to be confused with adjudicated or sanctioned Anti-Doping Rule Violations (ADRV). These figures may not be identical to sanctioned cases, as the figures given in this report may contain findings that underwent the Therapeutic Use Exemption (TUE) approval process.

² The *Adverse Analytical Findings* (AAF) in years 2003 to 2007 included findings that are defined in 2008 and 2009 as *Atypical Findings*.

³ Includes *Adverse Analytical Findings* and *Atypical Findings*

**2009 Adverse Analytical Findings and Atypical Findings
Reported by Accredited Laboratories (Total and in ADAMS)**

Total Results per Laboratory (All Sports)

Table B

Laboratory		N Samples	N AAFs ¹	N AAFs ⁴ reported in ADAMS	% AAFs ¹	N ATFs ²	N ATFs ⁴ reported in ADAMS	% Total Findings ³
1	Sydney, Australia	6,834	41	41	0.60	129	129	2.49
2	Seibersdorf, Austria	6,146	52	52	0.85	66	67	1.92
3	Ghent, Belgium	6,052	179	179	2.96	88	93	4.41
4	Rio de Janeiro, Brazil	4,873	39	36	0.80	13	16	1.07
5	Montreal, Canada	16,597	323	106	1.95	65	49	2.34
6	Beijing, China	15,634	32	32	0.20	24	24	0.36
7	Bogota, Colombia	2,554	46	46	1.80	52	52	3.84
8	Havana, Cuba	1,939	24	23	1.24	32	32	2.89
9	Prague, Czech Republic	1,774	22	22	1.24	45	45	3.78
10	Helsinki, Finland	2,364	16	14	0.68	35	36	2.16
11	Paris, France	10,262	311	311	3.03	182	182	4.80
12	Cologne, Germany	17,324	155	155	0.89	209	206	2.10
13	Dresden, Germany	8,560	20	20	0.23	160	160	2.10
14	London, UK	7,952	44	44	0.55	29	29	0.92
15	Athens, Greece	4,761	39	41	0.82	41	38	1.68
16	Rome, Italy	15,041	159	150	1.06	225	223	2.55
17	Tokyo, Japan	7,384	16	16	0.22	3	3	0.26
18	Seoul, Korea	3,964	26	26	0.66	7	7	0.83
19	Penang, Malaysia	1,490	35	34	2.35	23	23	3.89
20	Oslo, Norway	4,848	37	36	0.76	56	56	1.92
21	Warsaw, Poland	3,334	38	37	1.14	70	71	3.24
22	Lisbon, Portugal	3,450	69	69	2.00	75	74	4.17
23	Bloemfontein, South Africa	3,261	30	30	0.92	19	19	1.50
24	Moscow, Russia	16,176	119	119	0.74	242	242	2.23
25	Barcelona, Spain	3,705	42	42	1.13	10	12	1.40
26	Madrid, Spain	7,132	80	80	1.12	197	197	3.88
27	Stockholm, Sweden	4,174	107	91	2.56	63	75	4.07
28	Lausanne, Switzerland	6,549	37	37	0.56	66	66	1.57
29	Bangkok, Thailand	3,029	31	31	1.02	7	9	1.25
30	Tunis, Tunisia	2,491	39	39	1.57	54	54	3.73
31	Ankara, Turkey	2,298	14	14	0.61	-	-	0.61
32	Los Angeles, USA	58,422	626	49	1.07	164	57	1.35
33	Salt Lake City, USA	13,594	143	13	1.05	63	15	1.52
34	New Delhi, India	2,451	77	77	3.14	1	1	3.18
35	Bucharest, Romania ⁵	1,509	23	25	1.52	4	4	1.79
TOTAL		277,928	3,091	2,137	1.11%	2,519	2,366	2.02%

¹ The *Adverse Analytical Findings* (AAF) in this report are not to be confused with adjudicated or sanctioned Anti-Doping Rule Violations (ADRV). These figures may not be identical to sanctioned cases, as the figures given in this report may contain findings that underwent the Therapeutic Use Exemption (TUE) approval process.

² The *Atypical Findings* (ATF) in this report are not to be confused with adjudicated or sanctioned Anti-Doping Rule Violations (ADRV). *Atypical Findings* may correspond to multiple measurements performed on the same *Athlete*, such as in cases of longitudinal studies on testosterone.

³ Includes *Adverse Analytical Findings* and *Atypical Findings*

⁴ AAFs and ATFs as compiled from ADAMS

⁵ Bucharest, Romania laboratory obtained its accreditation in July of 2009

**2009 Adverse Analytical Findings and Atypical Findings
Reported by Accredited Laboratories**

Table B1 Olympic Sports Results per Laboratory

Laboratory		N Samples	N Adverse Analytical Findings ¹	% Adverse Analytical Findings ¹	N Atypical Findings ²	% Total Findings ³
1	Sydney, Australia	3,830	14	0.37	65	2.06
2	Seibersdorf, Austria	5,311	28	0.53	58	1.62
3	Ghent, Belgium	4,688	88	1.88	75	3.48
4	Rio de Janeiro, Brazil	4,786	26	0.54	13	0.81
5	Montreal, Canada	11,690	228	1.95	60	2.46
6	Beijing, China	14,418	30	0.21	24	0.37
7	Bogota, Colombia	2,109	27	1.28	48	3.56
8	Havana, Cuba	1,706	15	0.88	25	2.34
9	Prague, Czech Republic	1,398	6	0.43	31	2.65
10	Helsinki, Finland	1,832	6	0.33	28	1.86
11	Paris, France	8,530	235	2.75	155	4.57
12	Cologne, Germany	14,356	108	0.75	187	2.05
13	Dresden, Germany	7,613	11	0.14	155	2.18
14	London, UK	5,668	31	0.55	14	0.79
15	Athens, Greece	4,524	38	0.84	39	1.70
16	Rome, Italy	14,114	146	1.03	207	2.50
17	Tokyo, Japan	5,495	4	0.07	2	0.11
18	Seoul, Korea	2,968	9	0.30	4	0.44
19	Penang, Malaysia	1,096	13	1.19	18	2.83
20	Oslo, Norway	3,799	17	0.45	40	1.50
21	Warsaw, Poland	2,996	18	0.60	59	2.57
22	Lisbon, Portugal	2,902	49	1.69	72	4.17
23	Bloemfontein, South Africa	2,072	20	0.97	9	1.40
24	Moscow, Russia	15,345	102	0.66	231	2.17
25	Barcelona, Spain	3,488	32	0.92	10	1.20
26	Madrid, Spain	5,979	59	0.99	170	3.83
27	Stockholm, Sweden	2,991	84	2.81	38	4.08
28	Lausanne, Switzerland	6,082	27	0.44	62	1.46
29	Bangkok, Thailand	1,266	15	1.18	3	1.42
30	Tunis, Tunisia	2,272	32	1.41	48	3.52
31	Ankara, Turkey	2,023	8	0.40	-	0.40
32	Los Angeles, USA	13,489	84	0.62	57	1.05
33	Salt Lake City, USA	3,034	11	0.36	16	0.89
34	New Delhi, India	2,035	39	1.92	1	1.97
35	Bucharest, Romania	1,124	14	1.25	-	1.25
TOTAL		187,029	1,674	0.90%	2,024	1.98%

¹ The *Adverse Analytical Findings* (AAF) in this report are not to be confused with adjudicated or sanctioned *Anti-Doping Rule Violations* (ADRV). These figures may not be identical to sanctioned cases, as the figures given in this report may contain findings that underwent the Therapeutic Use Exemption (TUE) approval process.

² The *Atypical Findings* (ATF) in this report are not to be confused with adjudicated or sanctioned *Anti-Doping Rule Violations* (ADRV). *Atypical Findings* may correspond to multiple measurements performed on the same *Athlete*, such as in cases of longitudinal studies on testosterone.

³ Includes *Adverse Analytical Findings* and *Atypical Findings*

**2009 Adverse Analytical Findings and Atypical Findings
Reported by Accredited Laboratories**

Table B2

Non-Olympic Sports Results per Laboratory

Laboratory		N Samples	N Adverse Analytical Findings ¹	% Adverse Analytical Findings ¹	N Atypical Findings ²	% Total Findings ³
1	Sydney, Australia	3,004	27	0.90	64	3.03
2	Seibersdorf, Austria	835	24	2.87	8	3.83
3	Ghent, Belgium	1,364	91	6.67	13	7.62
4	Rio de Janeiro, Brazil	87	13	14.94	-	14.94
5	Montreal, Canada	4,907	95	1.94	5	2.04
6	Beijing, China	1,216	2	0.16	-	0.16
7	Bogota, Colombia	445	19	4.27	4	5.17
8	Havana, Cuba	233	9	3.86	7	6.87
9	Prague, Czech Republic	376	16	4.26	14	7.98
10	Helsinki, Finland	532	10	1.88	7	3.20
11	Paris, France	1,732	76	4.39	27	5.95
12	Cologne, Germany	2,968	47	1.58	22	2.32
13	Dresden, Germany	947	9	0.95	5	1.48
14	London, UK	2,284	13	0.57	15	1.23
15	Athens, Greece	237	1	0.42	2	1.27
16	Rome, Italy	927	13	1.40	18	3.34
17	Tokyo, Japan	1,889	12	0.64	1	0.69
18	Seoul, Korea	996	17	1.71	3	2.01
19	Penang, Malaysia	394	22	5.58	5	6.85
20	Oslo, Norway	1,049	20	1.91	16	3.43
21	Warsaw, Poland	338	20	5.92	11	9.17
22	Lisbon, Portugal	548	20	3.65	3	4.20
23	Bloemfontein, South Africa	1,189	10	0.84	10	1.68
24	Moscow, Russia	831	17	2.05	11	3.37
25	Barcelona, Spain	217	10	4.61	-	4.61
26	Madrid, Spain	1,153	21	1.82	27	4.16
27	Stockholm, Sweden	1,183	23	1.94	25	4.06
28	Lausanne, Switzerland	467	10	2.14	4	3.00
29	Bangkok, Thailand	1,763	16	0.91	4	1.13
30	Tunis, Tunisia	219	7	3.20	6	5.94
31	Ankara, Turkey	275	6	2.18	-	2.18
32	Los Angeles, USA	44,933	542	1.21	107	1.44
33	Salt Lake City, USA	10,560	132	1.25	47	1.70
34	New Delhi, India	416	38	9.13	-	9.13
35	Bucharest, Romania ³	385	9	2.34	4	3.38
TOTAL		90,899	1,417	1.56%	495	2.10%

¹ The *Adverse Analytical Findings* (AAF) in this report are not to be confused with adjudicated or sanctioned Anti-Doping Rule Violations (ADRV). These figures may not be identical to sanctioned cases, as the figures given in this report may contain findings that underwent the Therapeutic Use Exemption (TUE) approval process.

² The *Atypical Findings* (ATF) in this report are not to be confused with adjudicated or sanctioned Anti-Doping Rule Violations (ADRV). *Atypical Findings* may correspond to multiple measurements performed on the same *Athlete*, such as in cases of longitudinal studies on testosterone.

³ Includes *Adverse Analytical Findings* and *Atypical Findings*

2009 Adverse Analytical Findings and Atypical Findings Reported by Accredited Laboratories

Table C

Olympic Sport Sample Analysis

Sport	Total Samples per Sport	A Sample Adverse Analytical Findings ¹	A Sample Atypical Findings ²	A Sample Total Findings ³	% Adverse Analytical Findings ¹
Aquatics	13,995	91	65	156	0.65%
Archery	975	14	4	18	1.44%
Athletics	26,593	170	228	398	0.64%
Badminton	1,175	2	6	8	0.17%
Basketball	11,150	222	119	341	1.99%
Biathlon	2,148	6	21	27	0.28%
Bobsleigh	1,440	2	17	19	0.14%
Boxing	3,231	53	32	85	1.64%
Canoe / Kayak	3,821	23	49	72	0.60%
Curling	467	2	12	14	0.43%
Cycling	21,835	318	406	724	1.46%
Equestrian	462	10	2	12	2.16%
Fencing	1,918	8	20	28	0.42%
Football	32,526	163	406	569	0.50%
Gymnastics	2,462	18	19	37	0.73%
Handball	3,650	31	43	74	0.85%
Hockey	2,118	26	19	45	1.23%
Ice Hockey	6,065	77	74	151	1.27%
Judo	4,068	25	30	55	0.61%
Luge	588	3	6	9	0.51%
Modern Pentathlon	548	2	6	8	0.36%
Rowing	4,592	13	44	57	0.28%
Sailing	856	7	11	18	0.82%
Shooting	2,630	24	13	37	0.91%
Skating	4,346	14	33	47	0.32%
Skiing	5,742	35	49	84	0.61%
Table Tennis	1,066	10	4	14	0.94%
Taekwondo	1,679	7	18	25	0.42%
Tennis	3,945	17	37	54	0.43%
Triathlon	3,262	33	69	102	1.01%
Volleyball	5,121	41	48	89	0.80%
Weightlifting	7,534	158	67	225	2.10%
Wrestling	4,894	47	46	93	0.96%
Ice Sport⁴	84	1	1	2	1.19%
Hockey/ Skating⁴	43	1	0	1	2.33%
Total	187,029	1,674	2,024	3,698	0.90%

¹ The Adverse Analytical Findings (AAF) in this report are not to be confused with adjudicated or sanctioned Anti-Doping Rule Violations (ADRV). These figures may not be identical to sanctioned cases, as the figures given in this report may contain findings that underwent the Therapeutic Use Exemption (TUE) approval process.

² The Atypical Findings (ATF) in this report are not to be confused with adjudicated or sanctioned Anti-Doping Rule Violations (ADRV). Atypical Findings may correspond to multiple measurements performed on the same Athlete, such as in cases of longitudinal studies on testosterone.

³ Includes Adverse Analytical Findings and Atypical Findings

⁴ "Ice Sport"/"Hockey/Skating" was designated on Doping Control Form and therefore unable to assign by single sport or federation.

2009 Adverse Analytical Findings and Atypical Findings Reported by Accredited Laboratories

Table D1

Sample Analysis in IOC recognized Sports

Sport	Total per Sport	Adverse Analytical Findings ¹	Atypical Findings ²	A Sample Total Findings ³	% Adverse Analytical Findings ¹
Air Sports	130	1	1	2	0.77%
Bandy	160	1	1	2	0.63%
Baseball	19,560	490	51	541	2.51%
Baseball/ Softball ⁴	255	11	1	12	4.31%
Billiard Sports	402	14	-	14	3.48%
Boules	155	2	-	2	1.29%
Bowling	437	6	1	7	1.37%
Bridge	28	2	-	2	7.14%
Chess	111	1	-	1	0.90%
Cricket	804	3	-	3	0.37%
Dance Sport	392	1	1	2	0.26%
Floorball	632	3	14	17	0.47%
Golf	1,530	33	7	40	2.16%
Karate	1,154	12	13	25	1.04%
Korfball	106	-	-	-	0.00%
Life Saving	335	2	1	3	0.60%
Motorcycle Racing	380	14	7	21	3.68%
Mountaineering and Climbing	311	3	6	9	0.96%
Netball	257	1	-	1	0.39%
Orienteering	434	2	4	6	0.46%
Pelote Basque	163	-	1	1	0.00%
Polo	6	1	-	1	16.67%
Powerboating	206	5	1	6	2.43%
Racquetball	18	-	-	-	0.00%
Rollersports	705	9	8	17	1.28%
Rugby ⁵	5,725	39	69	108	0.68%
Softball	1,080	7	1	8	0.65%
Sport Climbing	108	-	2	2	0.00%
Squash	400	4	4	8	1.00%
Sumo	116	3	2	5	2.59%
Surfing	76	6	-	6	7.89%
Tug of War	106	2	2	4	1.89%
Underwater Sports	395	8	4	12	2.03%
Water Skiing	211	2	2	4	0.95%
Wushu	453	2	-	2	0.44%
TOTAL	37,341	690	204	894	1.85%

Table D2

Sample Analysis in Paralympic Sports

Sport	Total per Sport	Adverse Analytical Findings ¹	Atypical Findings ²	A Sample Total Findings*	% Adverse Analytical Findings ¹
Paralympic Sports	820	11	7	18	1.34%

¹ The **Adverse Analytical Findings (AAF)** in this report are not to be confused with adjudicated or sanctioned **Anti-Doping Rule Violations (ADRV)**. These figures may not be identical to sanctioned cases, as the figures given in this report may contain findings that underwent the Therapeutic Use Exemption (TUE) approval process.

² The **Atypical Findings (ATF)** in this report are not to be confused with adjudicated or sanctioned **Anti-Doping Rule Violations (ADRV)**. *Atypical Findings* may correspond to multiple measurements performed on the same *Athlete*, such as in cases of longitudinal studies on testosterone.

³ Includes *Adverse Analytical Findings* and *Atypical Findings*

⁴ "Baseball/Softball" was designated on Doping Control Form and therefore unable to assign by single sport or federation.

⁵ Includes *Samples* noted as "Rugby" and "Rugby Union".

2009 Adverse Analytical Findings and Atypical Findings Reported by Accredited Laboratories

Table D3

Sample Analysis in other Sports

Sport	Total per Sport	Adverse Analytical Findings ¹	Atypical Findings ²	A Sample Total Findings ³	% Adverse Analytical Findings ¹
Aikido	4	-	-	-	0.00%
American Football	42,171	325	185	510	0.77%
Bodybuilding and Fitness	1,400	230	42	272	16.43%
Casting	14	3	3	6	21.43%
Darts	29	-	4	4	0.00%
Dragon Boat	80	-	-	-	0.00%
Draughts	8	-	-	-	0.00%
Fistball	10	-	-	-	0.00%
Flying Disc	34	-	1	1	0.00%
Go	-	-	-	-	0.00%
Ju-Jitsu	100	-	1	1	0.00%
Kendo	27	1	-	1	3.70%
Kickboxing	431	19	2	21	4.41%
Minigolf	80	1	-	1	1.25%
Muay Thai	172	4	2	6	2.33%
Powerlifting	2,279	86	28	114	3.77%
Sambo	43	1	-	1	2.33%
Sepak Takraw	98	1	-	1	1.02%
Sleddog	4	-	-	-	0.00%
Soft Tennis	49	-	-	-	0.00%
Sports Fishing	21	-	-	-	0.00%
TOTAL	47,054	671	268	939	1.43%

¹ The *Adverse Analytical Findings* (AAF) in this report are not to be confused with adjudicated or sanctioned Anti-Doping Rule Violations (ADRV). These figures may not be identical to sanctioned cases, as the figures given in this report may contain findings that underwent the Therapeutic Use Exemption (TUE) approval process.

² The *Atypical Findings* (ATF) in this report are not to be confused with adjudicated or sanctioned Anti-Doping Rule Violations (ADRV). *Atypical Findings* may correspond to multiple measurements performed on the same *Athlete*, such as in cases of longitudinal studies on testosterone.

³ Includes *Adverse Analytical Findings* and *Atypical Findings*

**2009 Adverse Analytical Findings and Atypical Findings
Reported by Accredited Laboratories in ADAMS**

Table E Number of Prohibited Substances Identified in Each Drug Class
 (All Sports)

Substance Group	Number*	% of all reported findings*
S1. Anabolic Agents	3,297	64.9%
S8. Cannabinoids	399	7.8%
S6. Stimulants	325	6.4%
S3. Beta-2 Agonists	303	6.0%
S5. Diuretics and Other Masking Agents	273	5.4%
S9. Glucocorticosteroids	265	5.2%
S2. Hormones and Related Substances	100	2.0%
S4. Hormone Antagonists and Modulators	50	1.0%
P2. Beta-Blockers	38	0.7%
S7. Narcotics	24	0.5%
M2. Chemical and Physical Manipulation	5	0.1%
P2. Alcohol	5	0.1%
M1. Enhancement of Oxygen Transfer	-	0.0%
TOTAL	5,084	

* The *Adverse Analytical Findings (AAF)* and *Atypical Findings (ATF)* in this report are not to be confused with adjudicated or sanctioned *Anti-Doping Rule Violations (ADRV)*, as the figures given in this report may contain findings that underwent the Therapeutic Use Exemption (TUE) approval process or multiple findings on the same *Athlete*. In addition, *Atypical Findings* may correspond to multiple measurements performed on the same *Athlete*, such as in the case of longitudinal studies on testosterone.

**2009 Adverse Analytical Findings and Atypical Findings
Reported by Accredited Laboratories in ADAMS**

Table F Substances Identified in Each Drug Class (All Sports)

S1.1.a. Anabolic Agents - Exogenous AAS	Occurrences	% within drug class
Stanozolol	208	6.3%
Nandrolone	155	4.7%
Methandienone	110	3.3%
Metenolone	44	1.3%
Boldenone	43	1.3%
Mesterolone	27	0.8%
Drostanolone	24	0.7%
Methyltestosterone	17	0.5%
Dehydrochloromethyltestosterone	13	0.4%
Oxandrolone	11	0.3%
Trenbolone	10	0.3%
Oxymetholone	6	0.2%
Methasterone	3	0.1%
Boldione	3	0.1%
Methyltrienolone	1	0.03%
Mestanolone	1	0.03%
Clostebol	1	0.03%
1-androstenedione	1	0.03%
1-testosterone	1	0.03%
19-norandrostenedione	1	0.03%
Fluoxymesterone	1	0.03%
subtotal*	681	

S1.1.b. Anabolic Agents - Endogenous AAS¹	Occurrences	% within drug class
Testosterone (TE ratio)	2,319	70.3%
Prasterone (DHEA)	85	2.6%
Exogenous Steroid(s) by IRMS	79	2.4%
Nandrolone metabolite(s)	41	1.2%
Androsterone	11	0.3%
Epitestosterone	8	0.2%
Etiocholanolone	5	0.2%
Dihydrotestosterone	1	0.03%
subtotal*	2,549	

S.1.2 Other Anabolic Agents	Occurrences	% within drug class
Clenbuterol	67	2.0%
subtotal*	67	

S.1. All Anabolic Agents	Occurrences
TOTAL*	3,297

¹ Reporting of an Endogenous AAS may be due to detection of a concentration outside normal reference ranges and/or establishment of an exogenous source by GC/C/IRMS.

**2009 Adverse Analytical Findings and Atypical Findings
Reported by Accredited Laboratories in ADAMS**

Table F

(cont'd)

Substances Identified in Each Drug Class (All Sports)

S2. Hormones and Related Substances	Occurrences	% within drug class
Erythropoetin (EPO)	56	56.0%
Gonadotrophins (hCG)	25	25.0%
Mircera (CERA)	8	8.0%
Gonadotrophins (LH)	6	6.0%
Erythropoetin (Darbepoetin)	4	4.0%
Growth Hormone (hGH)	1	1.0%
TOTAL*	100	

S3. Beta-2 Agonists	Occurrences	% within drug class
Terbutaline	157	51.8%
Formoterol	84	27.7%
Salbutamol	29	9.6%
Salmeterol	23	7.6%
Fenoterol	5	1.7%
Reproterol	3	1.0%
Ritodrine	1	0.3%
Pirbuterol	1	0.3%
TOTAL*	303	

S4. Hormone Antagonists and Modulators	Occurrences	% within drug class
Tamoxifen	19	38.0%
Anastrozole	10	20.0%
Clomiphene	6	12.0%
Letrozole	5	10.0%
Formestane	4	8.0%
Exemestane	2	4.0%
6-oxo-androstenedione	2	4.0%
Androst-1,4,6-triene-3,17-dione (ATD)	1	2.0%
Aminoglutethimide	1	2.0%
TOTAL*	50	

S5. Diuretics and Other Masking Agents	Occurrences	% within drug class
Furosemide	92	33.7%
Hydrochlorothiazide	90	33.0%
Canrenone	21	7.7%
Indapamide	14	5.1%
Chlorothiazide	12	4.4%
Triamterene	10	3.7%
Amiloride	8	2.9%
Acetazolamide	8	2.9%
Probenecid	7	2.6%
Althiazide	3	1.1%
Torasemide	2	0.7%
Dorzolamide	1	0.4%
Bumetanide	1	0.4%
Spirolactone	1	0.4%
Hydroxyethyl starch (HES)	1	0.4%
Bendroflumethiazide	1	0.4%
Thiazide	1	0.4%
TOTAL*	273	

* The Adverse Analytical Findings (AAF) and Atypical Findings (ATF) in this report are not to be confused with adjudicated or sanctioned Anti-Doping Rule Violations (ADRV), as the figures given in this report may contain findings that underwent the Therapeutic Use Exemption (TUE) approval process or multiple findings on the same Athlete. In addition, Atypical Findings may correspond to multiple measurements performed on the same Athlete, such as in the case of longitudinal studies on testosterone.

**2009 Adverse Analytical Findings and Atypical Findings
Reported by Accredited Laboratories in ADAMS**

Table F

Substances Identified in Each Drug Class
(All Sports)

(cont'd)

S6. Stimulants	Occurrences	% within drug class
Cocaine	60	18.5%
Ephedrine	44	13.5%
Methylphenidate	31	9.5%
Methylhexanamine (dimethylpentylamine)	31	9.5%
Amphetamine	27	8.3%
Cathine	15	4.6%
Sibutramine	11	3.4%
Mephentermine	11	3.4%
Isometheptene	9	2.8%
Methamphetamine (D-)	9	2.8%
4-phenylpiracetam (carphedon)	8	2.5%
Modafinil	8	2.5%
D-Amphetamine	8	2.5%
Heptaminol	8	2.5%
Oxilofrine	6	1.8%
Phentermine	6	1.8%
Parahydroxyamphetamine	4	1.2%
Nikethamide	4	1.2%
Fenproporex	3	0.9%
Levmetamphetamine	3	0.9%
Norfenfluramine	2	0.6%
Fenetylline	2	0.6%
Octopamine	2	0.6%
Phenmetrazine	2	0.6%
Methylenedioxymethamphetamine	1	0.3%
Tuaminoheptane	1	0.3%
Methylephedrine	1	0.3%
Strychnine	1	0.3%
Pholedrine	1	0.3%
Pemoline	1	0.3%
Amfrepamone	1	0.3%
Bromantan	1	0.3%
Methylenedioxyamphetamine	1	0.3%
Benzylpiperazine	1	0.3%
other	1	0.3%
TOTAL*	325	

S7. Narcotics	Occurrences	% within drug class
Morphine	17	70.8%
Oxycodone	4	16.7%
Methadone	1	4.2%
Hydromorphone	1	4.2%
Buprenorphine	1	4.2%
TOTAL*	24	

* The Adverse Analytical Findings (AAF) and Atypical Findings (ATF) in this report are not to be confused with adjudicated or sanctioned Anti-Doping Rule Violations (ADRV), as the figures given in this report may contain findings that underwent the Therapeutic Use Exemption (TUE) approval process or multiple findings on the same Athlete. In addition, Atypical Findings may correspond to multiple measurements performed on the same Athlete, such as in the case of longitudinal studies on testosterone.

2009 *Adverse Analytical Findings and Atypical Findings*
Reported by Accredited Laboratories in ADAMS

Table F
(cont'd)

Substances Identified in Each Drug Class
(All Sports)

S8. Cannabinoids	Occurrences	% within drug class
Cannabinoids	399	100.0%
TOTAL*	399	

S9. Glucocorticosteroids	Occurrences	% within drug class
Budesonide	120	45.3%
Prednisolone + Prednisone	41	15.5%
Betamethasone	39	14.7%
Dexamethasone	17	6.4%
Prednisolone	16	6.0%
Triamcinolone	12	4.5%
Methylprednisolone	9	3.4%
Desonide	6	2.3%
Prednisone	3	1.1%
Triamcinolone Acetonide	1	0.4%
16a-hydroxyprednisolone	1	0.4%
TOTAL*	265	

P1. Alcohol	Occurrences	% within drug class
Alcohol	5	100.0%
TOTAL*	5	

P2. Beta-Blockers	Occurrences	% within drug class
Propranolol	11	28.9%
Metoprolol	10	26.3%
Atenolol	8	21.1%
Bisoprolol	7	18.4%
Carvedilol	1	2.6%
Carteolol	1	2.6%
TOTAL*	38	

M2. Chemical and Physical Manipulation	Occurrences	% within drug class
Manipulation	5	100.0%
TOTAL*	5	

* The *Adverse Analytical Findings (AAF)* and *Atypical Findings (ATF)* in this report are not to be confused with adjudicated or sanctioned *Anti-Doping Rule Violations (ADRV)*, as the figures given in this report may contain findings that underwent the Therapeutic Use Exemption (TUE) approval process or multiple findings on the same *Athlete*. In addition, *Atypical Findings* may correspond to multiple measurements performed on the same *Athlete*, such as in the case of longitudinal studies on testosterone.

2009 Adverse Analytical Findings and Atypical Findings Reported by Accredited Laboratories in ADAMS
Table G
Total Laboratory Adverse Analytical Findings* and Atypical Findings* per Drug Class (All Sports)

Laboratory	S1. Anabolic Agents	S2. Hormones and Related Substances	S3. Beta-2 Agonists	S4. Hormone Antagonists and Modulators	S5. Diuretics and Other Masking Agents	S6. Stimulants	S7. Narcotics	S8. Canna- binoids	S9. Glucocortico- steroids	P1. Alcohol	P2. Beta- Blockers	M2. Chemical and Physical Manipulation	Total Findings per Lab	% of total Findings
Sydney, Australia	138	1	8	2	5	6	-	12	1	-	-	-	173	3.4%
Seibersdorf, Austria	90	4	7	2	14	5	-	8	-	-	4	1	135	2.7%
Ghent, Belgium	183	2	51	3	25	35	1	44	8	-	2	-	354	7.0%
Rio de Janeiro, Brazil	29	0	-	1	5	15	-	5	4	-	1	-	60	1.2%
Montreal, Canada	92	7	6	12	14	15	-	26	27	-	3	-	202	4.0%
Beijing, China	41	6	5	-	3	1	-	-	2	-	1	-	59	1.2%
Bogota, Colombia	101	2	1	2	9	4	-	8	9	-	-	-	136	2.7%
Havana, Cuba	47	-	-	-	2	2	-	2	3	-	-	-	56	1.1%
Prague, Czech Republic	93	0	-	1	8	3	-	4	1	-	-	-	110	2.2%
Helsinki, Finland	48	-	1	2	3	1	-	3	-	-	-	-	58	1.1%
Paris, France	206	27	56	3	24	22	-	94	86	-	5	-	523	10.3%
Cologne, Germany	314	2	9	2	14	11	2	20	5	-	5	4	388	7.6%
Dresden, Germany	164	3	4	1	5	2	-	5	1	-	-	-	185	3.6%
London, UK	40	1	4	-	1	18	-	8	3	-	-	-	75	1.5%
Athens, Greece	53	-	-	-	2	17	-	7	1	-	1	-	81	1.6%
Rome, Italy	234	13	61	2	11	29	5	24	26	-	2	-	407	8.0%
Tokyo, Japan	10	1	2	2	4	1	-	2	1	-	1	-	24	0.5%
Seoul, Korea	21	2	-	-	8	2	-	1	2	-	-	-	36	0.7%
Penang, Malaysia	44	-	1	-	1	4	4	2	1	-	-	-	57	1.1%
Oslo, Norway	65	4	2	2	5	8	-	7	2	5	-	-	100	2.0%
Warsaw, Poland	104	-	2	4	4	5	-	15	2	-	-	-	136	2.7%
Lisbon, Portugal	79	2	4	-	12	11	3	25	10	-	5	-	151	3.0%
Bloemfontein, S Africa	37	1	-	-	3	6	-	5	1	-	-	-	53	1.0%
Moscow, Russia	348	10	-	-	34	16	1	7	3	-	2	-	421	8.3%
Barcelona, Spain	23	1	11	1	7	5	1	8	6	-	1	-	64	1.3%
Madrid, Spain	207	3	18	-	3	26	-	21	8	-	-	-	286	5.6%
Stockholm, Sweden	98	-	39	1	2	6	1	2	32	-	-	-	181	3.6%
Lausanne, Switzerland	52	4	-	-	1	9	3	10	3	-	2	-	84	1.7%
Bangkok, Thailand	31	-	-	-	5	13	1	2	4	-	3	-	59	1.2%
Tunis, Tunisia	110	-	-	-	3	5	-	6	2	-	-	-	126	2.5%
Ankara, Turkey	8	-	-	-	3	1	-	3	1	-	-	-	16	0.3%
Los Angeles, USA	67	4	11	5	6	10	2	4	6	-	-	-	115	2.3%
Salt Lake City, USA	19	0	-	1	2	1	-	5	3	-	-	-	31	0.6%
New Delhi, India	77	-	-	1	23	9	-	-	-	-	-	-	110	2.2%
Bucharest, Romania	24	-	-	-	2	1	-	4	1	-	-	-	32	0.6%
TOTAL PER DRUG CLASS	3,297	100	303	50	273	325	24	399	265	5	38	5	5,084	
% of Drug Class	64.9%	2.0%	6.0%	1.0%	5.4%	6.4%	0.5%	7.8%	5.2%	0.1%	0.7%	0.1%		

* The Adverse Analytical Findings (AAF) and Atypical Findings (ATF) in this report are not to be confused with adjudicated or sanctioned Anti-Doping Rule Violations (ADRV), as the figures given in this report may contain findings that underwent the Therapeutic Use Exemption (TUE) approval process or multiple findings on the same Athlete. In addition, Atypical Findings may correspond to multiple measurements performed on the same Athlete, such as in the case of longitudinal studies on testosterone.

2009 Athlete Biological Passport

Blood Samples Analyzed and Reported by Accredited Laboratories in ADAMS

Table I Total Samples Analyzed per Laboratory
(All Sports)

Laboratory		N Samples
1	Sydney , Australia	-
2	Seibersdorf , Austria	70
3	Ghent , Belgium	816
4	Rio de Janeiro , Brazil	-
5	Montreal , Canada	71
6	Beijing , China	-
7	Bogota , Colombia	-
8	Havana , Cuba	-
9	Prague , Czech Republic	-
10	Helsinki , Finland	-
11	Paris , France	-
12	Cologne , Germany	1,739
13	Dresden , Germany	6
14	London , UK	-
15	Athens , Greece	-
16	Rome , Italy	59
17	Tokyo , Japan	-
18	Seoul , Korea	-
19	Penang , Malaysia	-
20	Oslo , Norway	-
21	Warsaw , Poland	-
22	Lisbon , Portugal	-
23	Bloemfontein , South Africa	-
24	Moscow , Russia	-
25	Barcelona , Spain	-
26	Madrid , Spain	423
27	Stockholm , Sweden	-
28	Lausanne , Switzerland	2,589
29	Bangkok , Thailand	-
30	Tunis , Tunisia	-
31	Ankara , Turkey	-
32	Los Angeles , USA	-
33	Salt Lake City , USA	309
34	New Delhi , India	-
35	Bucharest , Romania	-
TOTAL		6,082