
	<p><b>Clean Sky 2 Joint Undertaking</b></p> <p>Ex-post Audit</p>	
<p>Ex-post audit Report 2016 – Final version</p>		
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## Introduction

The purpose of this Ex-post Audit Report is to provide input to the annual assurance declaration for the year 2016 of the Executive Director of the CSJU.

In this context, the report describes the results of the ex-post audits performed until today, which potentially provide support or put in doubt the confirmations given in the assurance declaration by the Director, i.e.:

- The information provided in the Final Annual Activity Report (AAR) 2016 gives a true and fair view
- Resources have been used in the year 2016 for the intended purpose
- Resources have been spent complying with sound financial management
- The underlying transactions are legal and regular
- No information, which could hamper the interest of the JU, is missing in the AAR 2016

The results of the EPA process represent a significant element of the Internal Control System of the JU and need to be described in the AAR. Therefore, this report summarises key information regarding the EPA process, which should be summarised in the AAR 2016 in the section related to Internal Controls.

The main objectives of the ex-post audits are:

- 1) Through the achievement of a number of quantitative targets, assess the legality and regularity of the validation of cost claims performed by the JU's management
- 2) Provide an adequate indication on the effectiveness of the related ex-ante controls
- 3) Provide the basis for corrective and recovery activities, if necessary

The scope of the audits performed during the year 2016 comprised of both FP7 grant agreements and H2020 grant agreements and their related expenditure. Audit activities and their results are presented per program in each of the sections of this report.

On the basis of the H2020 Audit Strategy and in line with the related CSJU Implementing Procedure<sup>1</sup> CSJU is calculating its specific audit results for the H2020 program on the basis of its specific representative samples established from the CSJU population of grants.

In addition, cost claims pertaining to CSJU projects will - to a certain extent - also form part of the Common Representative Sample (CRS) of DG RTD, which will be the basis for calculating the results of the ex-post controls for the entire H2020 Research family.

This report summarises the results of the audits which stem from the specific CSJU sample. At the time of this report no results of the CRS of DG RTD were available.

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<sup>1</sup> Clean Sky 2 JU Procedure for implementing the H2020 Ex-post Audit Strategy

## I. Ex-post audits performed during the year 2016

### II.1 Current status and time planning

In the year 2016, cost claims pertaining to the execution of grant agreements related to both the FP7 and H2020 programs were subject to audits.

For FP7 cost claims one new audit batch assignment has been launched in the year 2016, which is still on-going.

The FP7 batch assignment EPA 17/2016 was launched in August 2016 by sending the announcement letters to the selected beneficiaries. The scope of the assignments included 15 audits covering 6 FP7 Grant Agreements for Members. The audits were assigned to one external audit firm. For 12 of the 15 audits results are final. From these audits, 7 Final Audit Reports have been received until today. The total audited value of this audit batch was Euro 18.021.250 (reported validated project costs) and Euro 9.010.625 (requested JU contribution).

In addition to the FP7 audits launched in the year 2016, the results of 3 audits stemming from the previous EPA exercises of the years 2012 and 2015 are considered in the exercise of the year 2016. The concerned audit reports were finalised by the audit firms with a delay and results could not be reflected in the calculation of error rates of the years 2012 to 2015.

The total audited value of the 15 FP7 audits contributing to the ex-post audit exercise 2016 was Euro 37.845.362 (reported project costs) and Euro 18.922.681 (requested JU contribution).

**Table 1a:**

EPA exercise 2016 FP7 Program		
	Total value of audited project costs	Number of audits
FP7 Audits launched in 2016	18.021.250	12
FP7 Audits launched before 2016	19.824.112	3
Total FP7 audits included in EPA exercise 2016	37.845.362	15

The first H2020 batch assignment EPA 1/2016 was launched in July 2016 by sending the announcement letters to the selected beneficiaries. The scope of the assignments included 6 audits covering 4 Grant Agreements for Members. The audits were performed by the Common Audit Service of the European Commission. Final Audit Reports have been received during 2016 for all audits of this batch.

The total audited value of this H2020 audit batch was Euro 13.067.875 (reported validated project costs) and Euro 6.533.938 (requested JU contribution).

**Table 1b:**

EPA exercise 2016 H2020 Program		
	Total value of audited project costs	Number of audits
H2020 Audits launched in 2016	13.067.875	6
Total H2020 audits included in EPA exercise 2016	13.067.875	6

Based on the results of the final audit reports, overpayments for FP7 and H2020 projects have been identified and corrected. Representative and residual error rates have been calculated and contribute to the Declaration of Assurance for 2016 of the Executive Director.

## II.2 Audit sample and coverage

The FP7 sample considered in the ex-post audit exercise 2016 and included in the calculation of the FP7 error rates 2016 is composed of three layers:

- (A) 1 remaining audit stemming from the EPA exercise 2012 on GAMs not included in error rates 2012 to 2015
- (B) 2 remaining audits stemming from the EPA exercise 2015 on GAMs not included in 2015 error rate
- (C) 12 audits launched in August 2016<sup>2</sup>

The samples consist of validated cost claims from GAMs stemming from projects carried out in the years 2008 to 2015.

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<sup>2</sup> The number of audits launched in 2016 is higher

**Table 1c:****FP7 Audit exercise 2016**

Audit exercise 2016 FP7	Totals	GAMs 2009	GAMs 2010	GAMs 2011	GAMs 2012	GAMs 2013	GAMs 2014	GAMs 2015
<b>( A )</b>	1 remaining audits from EPA exercise 2012 not included in 2012 error rates (Batch 7)							
audited value	1,346,711.92	489,204.26	857,507.66					
number of cost claims	2	1	1					
number of audits	1							
<b>( B )</b>	2 Remaining audits from EPA exercise 2015 (Batch16) on GAMs							
audited value	18,477,400.38				13,152,941.20	5,324,459.18		
number of cost claims	4				2	2		
number of audits	2							
<b>( C )</b>	12 out of 15 Audits launched in 2016 (Batch 17) on GAMs							
audited value	18,021,249.52						10,338,868.24	7,682,381.28
number of cost claims	14						11	3
number of audits	12							
<b>total</b>								
audited value	37,845,361.82	489,204.26	857,507.66	0.00	13,152,941.20	5,324,459.18	10,338,868.24	7,682,381.28
number of cost claims	20	1	1	0	2	2	11	3
number of audits	15	0	0	0	0	0	0	0

The H2020 sample considered in the ex-post audit exercise 2016 and included in the calculation of the H2020 error rates 2016 consisted of only one layer **(D)**; it is composed of 1 batch of 6 audits launched in July 2016.

**Table 1d**

**H2020 Audit exercise 2016**

Audit exercise 2016 H2020	Totals	GAMs 2014	GAMs 2015
(D)	6 out of 6 Audits launched in 2016 (Batch 1) on GAMs		
audited value	13,067,875.10	1,555,758.58	11,512,116.52
number of cost claims	14	8	6
number of audits	6		
total			

The H2020 audit sample consisted of validated cost claims from GAMs stemming from the years 2014 and 2015. No beneficiary has been selected on the basis of a risk assessment.

For the calculation of the audit coverage, the accumulated audited value covered by the EPA exercises 2011 to 2016 is compared to the accumulated total amount of validated cost claims at the date of the closing for the Final Accounts 2016.

**Table 2a:**

**Accumulated FP7 audit coverage based on audits finalised:**

FP7 audits finalised	Euro
audited value from EPA exercise 2011	44,266,851
audited value from EPA exercise 2012	39,495,744
audited value from EPA exercise 2013	40,528,613
audited value from EPA exercise 2014	77,979,725
audited value from EPA exercise 2015	54,439,452
audited value from EPA exercise 2016	37,845,362
Total audited value of the years 2011 to 2016 <b>(a)</b>	294,555,745
Total audit population <b>(b)</b>	1,252,525,304
<b>Coverage (a) / (b)</b>	<b>23.5%</b>

The FP7 samples were established according to the methodology described in the FP7 ex-post audit strategy considering the following elements:

- Most significant cost claims (all CCs until a certain coverage starting from the biggest ones)
- Representative sample selected at random (by counting)
- Risk based sample (no beneficiary selected during 2016 on the basis of a risk assessment)

The sample taken in 2016 consisted of cost claims pertaining only to Members.

Since all audits launched on GAPS in previous years have been closed until today, no fresh audit results on GAPS had to be considered. The specific audit coverage for Grant Agreements of Partners (GAPs) stemming from previous audit exercises is presented in table 2b.

**Table 2b:**

**Accumulated audit coverage for GAPS of all EPA exercises:**

audits on GAPS (FP7 programme)	EUR
audited value from EPA exercise 2012(final)	760,538
audited value from EPA exercise 2013 (final)	3,397,200
audited value from EPA exercise 2014 (final)	1,260,041
audited value from EPA exercise 2015 (final)	60,291
audited value from EPA exercise 2016 (final)	0
Total audited value of the years 2012 to 2016 (a)	5,478,069
Total audit population (b)	158,381,792
Coverage (a) / (b)	3.5%

For the calculation of the audit coverage the same approach is taken as described above for the FP7 indicator: the audited value covered by the EPA 2016 is compared to the accumulated total amount of validated H2020 cost claims at the end of 2016):

**Table 2c:**

**H2020 audit coverage based on audits finalised:**

H2020 audits finalised		Euro
Total audited value from EPA exercise 2016 (final)	<b>(a)</b>	<b>13,067,875</b>
Total audit population	<b>(b)</b>	<b>82,524,117</b>
H2020 Coverage	<b>(a) / (b)</b>	<b>15.84%</b>

The H2020 sample for 2016 was established in line with the H2020 ex-post audit strategy as specific sample for CSJU, following the common sampling methodology agreed by the majority of the JUs in the H2020 research family<sup>3</sup>, considering the following elements:

- Representative sample
  - Most significant cost claims selected at random (the population was stratified to achieve a certain coverage of the most significant cost claims)
  - Remaining cost claims selected at random.
- Risk based sample (no beneficiary selected in 2016 on the basis of a risk assessment)

The sample consisted of cost claims pertaining only to Members.

For the H2020 grant agreements no audits on GAPs have been performed by the JU yet, as a population of auditable cost claims will be available at the earliest by the end of 2017.

### II.3 External audit firms under contract

FP7 Audits have been assigned to the external auditors in batches, using an EPA framework contract of DG RTD. In 2016 specific contracts have been signed with 1 individual audit firm for 1 batch assignment as follows:

**Table 3a:**

Audit Firms	Number of audit engagements	Number of cost claims	Audited value
Lubbock Fine	15	15	25.322.224
Total	15	15	25.322.224

<sup>3</sup> Note to DG RTD, Sampling methodology for JUs' specific representative sample in H2020 from 28.09.2016, sent by FCH JU, S2R JU, BBI JU, IMI JU, SESAR JU, ECSEL JU and CSJU



The 16 audits included in the EPA exercise 2016 had been assigned as follows:

**Table 3b:**

Audit Firms	Number of audit engagements	Number of cost claims	Audited value
PKF LittleJohn UK	3	6	19.824.112
Lubbock Fine	12	14	18.021.250
<b>Total</b>	<b>15</b>	<b>20</b>	<b>37.845.362</b>

H2020 ex-post audits have been carried out by the Common Audit Service (CAS) of DG RTD according to the H2020 Audit Strategy. In the year 2016 no contract with external audit firms was used by the CAS for this purpose.

**II. Quantitative audit results (indicators):**

**III.1 Audits launched, on-going, closed**

**Table 4a:**

FP7 audits	number	share of total launched
Status of audits launched in 2016		
Total number launched	15	
Draft audit reports received (1.version)	15	100%
Pre-final reports received	12	80%
Final reports received	<b>12</b>	<b>80%</b>

**Table 4b:**

FP7 audits	number	share of total launched
Status of audits launched in 2012 to 2015		
Total number launched and remaining open for EPA 2016	3	
Draft audit reports received	3	100%
Pre-final reports received	3	100%
Final reports received	<b>3</b>	<b>100%</b>

**Table 5:**

<b>H2020 audits</b>	number	share of total launched
Status of audits launched in 2016		
Total number launched	6	
Draft audit reports received (1.version)	6	100%
Pre-final reports received	6	100%
<b>Final reports received</b>	<b>6</b>	<b>100%</b>

### III.2 Adjustments and detected error rates

Table 6a:

Audit exercises - individual and accumulated until 2016	Audited value/requested contribution including not received reports	Adjustment	Adjustment in favour of CSJU	Adjustment in favour of the beneficiary	Detected error rate in favour of the beneficiary	Detected error rate in favour of CSJU	Representative error rate in favour of the beneficiary	Representative error rate in favour of CSJU	Systematic error rate in favour of JU	Total unaudited cost claims of audited beneficiaries (E)
<b>FP7 audits</b>										
Results audit exercises 2011 to 2015 (detected results incl. non representative)	346,244,137.55	-4,067,720.72	-8,739,500.12	4,671,779.39	1.35%	-2.52%				354,463,134.16
Results audit exercises 2011 to 2015 (representative results excl. risk based items)	301,801,647.22	-3,266,913.42	-7,176,098.41	3,909,184.98	1.30%	-2.38%	1.30%	-2.38%	-2.18%	340,223,246.75
Results audit exercise 2016 (detected results incl. non representative)	45,146,335.96	-1,303,397.08	-1,526,719.36	223,322.28	0.59%	-4.03%			-3.28%	106,935,383.62
Results audit exercise 2016 (representative results excl. risk based items)	38,637,025.92	-724,673.61	-947,995.89	223,322.28	0.71%	-3.03%	0.71%	-3.03%	-2.38%	78,415,726.92
Accumulated results all audit exercises (detected results incl. non representative)	391,390,473.51	-5,371,117.80	-10,266,219.48	4,895,101.67	1.66%	-3.49%			-2.81%	461,398,517.78
Accumulated results all audit exercises (representative results excl. risk based items)	340,438,673.14	-3,991,587.03	-8,124,094.30	4,132,507.26	1.57%	-3.09%	1.57%	-3.09%	-2.79%	418,638,973.67

**Table 6b:**

Audit exercises individual and accumulated until 2016	Audited value/requested contribution including not received reports	Total audited value/requested contribution of reports received	Adjustment	Adjustment in favour of CSJU	Adjustment in favour of the beneficiary	Detected error rate in favour of the beneficiary	Detected error rate in favour of CSJU	Representative error rate in favour of the beneficiary	Representative error rate in favour of CSJU	Systematic error rate in favour of JU	Total unaudited cost claims of audited beneficiaries (E)
<b>H2020 audits</b>											
Results audit exercise 2016 (all representative)	13,067,875.10	13,067,875.10	-129,320.98	-148,803.72	19,482.74	0.15%	-1.14%	0.15%	-1.14%	-0.39%	2,032,186.36

The (ex-post) detected error rate is an indicator of the quality of the ex-ante controls as it gives an estimate of errors that remain undetected after the ex-ante controls have been performed.

### **FP7 Error rate**

The accumulated **(ex-post) detected error rate**<sup>4</sup> in favour of the CSJU identified in the audited FP7 population in all audit exercises until 2016 amounts to 3.5%, (see table 6a). The rate represents a weighted average of the individual rates detected<sup>5</sup>.

The corresponding rate for the individual audit exercise of the year 2016 is at 4.0%. The audit results include one risk based audit engagement.

The **representative error rate**, which indicates the error rate applicable on the entire population of cost claims before corrective measures, amounts to 3.1% for the accumulated audit results of all EPA exercises.

The individual annual result for the year 2016 is 3.0%. This error rate does not include risk based audits, which by definition are not part of the representative sample.

The **(ex-post) residual error rate** indicates the “net-errors” that remain in the total population after implementing corrective actions resulting from the ex-post controls including extrapolation of systematic errors to non-audited cost claims. The residual error rate is calculated according to the following formula:

$$\text{ResER}\% = \frac{(\text{RepER}\% * (P-A) - (\text{RepER}_{\text{sys}}\% * E))}{P}$$

Taking into account the systematic adjustments proposed by the auditors in the FP7 audits performed until the year 2016, the following residual error rates are calculated:

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<sup>4</sup> Errors actually detected in the audited sample related to the total amount of the sample

<sup>5</sup> According to the CSJU Audit Strategy, the average representative error rate is calculated as simple average of all individual rates detected. In our view, the result of this simple average error rate is misleading. Using a non-weighted average of all error rates discovered in each of the cost claims, irrespective of the value of the total amounts involved, would require a sufficiently big sample size and population to arrive at a meaningful representative result.

**Table 7a:**

Calculation of FP7 residual error rate (ResER%): Accumulated 2008 to 2016	
Total population (P) =	1.252.525.304
Audited population (A)=	262.644.799
total non-audited cost claims of audited beneficiaries (E ) =	418.638.974
Representative error rate (RepER%) =	-3.09%
Systematic error rate (RepERsys%) =	-2.79%
ResER% =	-1.51%

**Table 7b:**

Calculation of FP7 residual error rate (ResER%): 2016	
Total population (P) =	183.366.516
Audited population (A)=	31.336.052
total non-audited cost claims of audited beneficiaries (E ) =	78.415.727
Representative error rate (RepER%) =	-3.03%
Systematic error rate (RepERsys%) =	-2.38%
ResER% =	-1.49%

The accumulated results established in the year 2016 indicate for the FP7 program a similar low level of the total accumulated residual error rate (for GAMs and GAPS) of 1.51% as in the previous year (1.52%). This result indicates again the full achievement of the JU's objective to remain with the ex-post residual error rate below the 2% limit.

The specific result of the audit batches related to audits on FP7 GAPs indicates a residual error rate of 1.47% (compared to 1.43% until end of 2015) as presented in the following table:

**Table 7c:**

Calculation of FP7 accumulated residual error rate (ResER%): GAPs EPA 2012 to 2016	
Total population (P) =	158.381.792
Audited population (A)=	5.478.069
total non-audited cost claims of audited beneficiaries (E ) =	6.904.661
Representative error rate (RepER%) =	-1,60%
Systematic error rate (RepERsys%) =	-1,60%
ResER% =	-1.47%

### **H2020 Error rate**

The audit results for H2020 projects stem from one audit exercise only. Therefore, no different values for annual and accumulated results are reported.

The **detected error rate**<sup>6</sup> in favour of the CSJU and the **representative error rate**<sup>7</sup> identified in the audited population for the individual audit exercise of the year 2016 amount to 1.14% for H2020 (see table 7d).

Taking into account the systematic adjustments proposed by the auditors in the audits performed in the year 2016, the following residual error rate is calculated:

<sup>6</sup> Errors actually detected in the audited sample related to the total amount of the sample

<sup>7</sup> Since all audits launched in 2016 belong to the CSJU representative sample (no risk based audits were carried out), the detected error rate corresponds to the representative error rate for the year 2016.

**Table 7d:**

Calculation of H2020 residual error rate (ResER%): 2016	
Total population (P) =	82.524.117
Audited population (A)=	13.067.875
total non-audited cost claims of audited beneficiaries (E ) =	2.032.186
Representative error rate (RepER%) =	-1.14%
Systematic error rate (RepERsys%) =	-0.39%
ResER% =	-0.95%



### III.3 Extrapolation

For FP7 beneficiaries, extrapolation is launched for all audits which have identified a net systematic error rate of all cost claims included in the individual audit of one beneficiary exceeding 1% (in favour of the JU).

Until June 2017, the extrapolation of systematic errors for the audit exercise 2016 pertaining to FP7 projects has been launched for 6 out of 7 audits being subject to the extension of audit findings. This represents 98% of the total value of extrapolation identified in the audit exercise 2016.

The extension of audit findings stemming from H2020 audits is done according to common criteria for the entire H2020 Research Family<sup>8</sup>.

In the first EPA exercise for H2020 for beneficiaries of CSJU, there is no extension of findings applicable due to the insignificant level of the detected systematic errors.

### III.4 Materiality

The control objective is to ensure for the CS programmes (FP7 and H2020), that the residual error rate, which represents the level of errors which remains undetected and uncorrected, does not exceed 2% of the total expense recognised until the end of the programme. 2% is therefore the materiality level set for the JU. A detailed description of the materiality criteria applied for the assessment of the audit results with a view to the assurance declaration of the Executive Director of the JU is provided in Annex 9 to the 2016 AAR.

The following materiality thresholds have been agreed with the audit firms for the FP7 audits launched until 2015:

- Overall materiality for qualification of the auditors opinion: 2% of total audited value of cost claims included in the audit report
- Reporting materiality for adjustments to be listed in the audit reports: Euro 150
- Sampling approach:
  - First sample layer: Selection of significant cost items in all cost categories (i.e. individual items with a value equal or above 10 % of the total costs declared in the individual cost claim (Form C))
  - Second sample layer: In addition, a random, statistical or judgemental sample of the residual amounts will be drawn and tested.

For all FP7 audits launched in 2016, materiality levels applied by the audit firms have been agreed with DG RTD. Overall materiality level is also 2%, but no audit opinion is expressed by the auditors.

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<sup>8</sup> The common criteria and harmonised implementation are currently developed by the Common Audit Service of DG RTD.

For the H2020 program, the CAS applies common materiality criteria, applicable to the entire Research Family, which aims to exclude with reasonable assurance the risk of undetected errors higher than 2%.

### **III. Implementation of audit results**

#### **FP7 results for EPA exercise 2016:**

Overpayments identified in audited cost claims pertaining to audits included in the ex-post audit exercise 2016 have been recovered during the year 2017 upon receiving Final Audit Reports by 100%. The correction of the accumulated error in audited cost claims since the beginning of the ex-post audit activity has therefor been fully implemented.

The correction of the financial effect of the detected systematic errors in unaudited cost claims pertaining to the EPA exercise 2016 has been launched in all concerned cases, i.e. 7 audits with an estimated maximum of 2 Mill Euro extrapolation value.

The finalisation of the extrapolation is still on-going as beneficiaries have requested extension of deadlines. As approximately 50% of the total extrapolation effect has been kept on hold by the JU during the ex-ante validation of the unaudited cost claims, the implementation of the extrapolation can be achieved through netting off with these amounts. The implementation will be fully settled during the final payments to the beneficiaries for the FP7 programme.

Due to the on-going extrapolation exercise of the year 2016 as described above, the accumulated rate of implementation of all audit results including detected and extrapolated errors for the EPA exercises 2011-2016 amounts to 78.8%, as shown in the table 8a.

**Table 8a****FP7 Program:**

<b>ACCUMULATED Total corrective action for EPA exercise 2011- 2016 - implementation achieved</b>				
<b>Audited value (of audited and unaudited cost claims)</b>	<b>Adjustments in favour of CSJU per audit reports</b>	<b>related overpayment</b>	<b>recovery of overpayment - (€)</b>	<b>recovery rate for overpayment -</b>
728,094,318.05	-22,828,002.69	-11,408,765.28	-8,987,298.14	78.78%

**H2020 results for EPA exercise 2016:**

Overpayments identified in audited cost claims pertaining to audits included in the ex-post audit exercise 2016 for H2020 projects have been recovered during the year 2017 upon receiving Final Audit Reports by 51.3%. The JU will continue to fully correct the comparatively low representative error (1.14%) stemming from the H2020 audits within the next possible periodic payments to the concerned beneficiaries.<sup>9</sup>

**Table 8b****H2020 Program:**

<b>Total corrective action implemented (fully implemented in the system)</b>				
<b>Audited value (of audited and unaudited cost claims)</b>	<b>Adjustments in favour of CSJU</b>	<b>related overpayment</b>	<b>recovered overpayment (€) (i.e. adjustments booked in the system for next payment)</b>	<b>recovery rate (%)</b>
15,100,061.46	-148,803.72	-104,162.60	-53,443.88	51.31%

<sup>9</sup> According to the Article 42.3 of the H2020 GA, the recovery of detected overpayments can only be deducted "from the total eligible costs declared, for the action, in the next periodic summary financial statement or in the final summary financial statement." Therefore, the JU considers the overpayments as corrected, when the related adjustments are booked in the grant management system.

#### **IV. Summary and conclusion for the Assurance declaration of the Executive Director in the AAR 2016 (version May 2017)**

The ex-post audit exercises 2011 to 2016 pertain to validated cost claims for GAMs and GAPs of the years 2008 to 2015 for the FP7 and H2020 programs. As described in the materiality criteria in the Annex to this document, the control objective of the JU is to ensure for the two individual CS programs, that the residual error rates, which represent the remaining level of errors in payments made after corrective measures, does not exceed 2% of the total expense incurred until the end of the individual programs.

As in the years before, the audit approach for FP7 grants is based on the CSJU ex-post Audit Strategy as approved by the GB in 2011. For the H2020 grants, Clean Sky 2 JU follows the common H2020 Audit Strategy of the Research family and the related implementing procedure of CSJU.

The results of the EPA process 2016 reflect the legality and regularity of the validation process for GAM execution 2008 to 2015 for the FP7 and H2020 programs. Thus, they do not directly relate to the entire expenditure incurred by the JU until the end of year 2016. However, the JU's EPA strategies are implemented through an on-going process, which produces accumulated results applicable to the entire expense incurred for the CS programs until a certain point of time. At present we have results for payments incurred for GAMs and GAPs 2008 to 2015. The accumulated audit coverage of the validated financial statements pertaining to GAMs and GAPs for the years 2008 to 2016 is 24% for the FP7 program and 16% for the H2020 program.

##### **FP7 program:**

At the end of 2016, the indicators established from the FP7 samples, stemming from 6 audit exercises carried out in the years 2011 to 2016, reflect a nearly unchanged accumulated representative error in favour of the JU in the validated FP7 operational expense of **3,1%**, compared to 3.0% for the accumulated exercises until end of 2015.

Based on the representative error rate, the accumulated residual error rate, i.e. the accumulated error stemming from the audit exercises 2011 to 2016 remaining after cleaning the population from systematic errors, amounts to **1.5%**, the same result as for the corresponding residual error rate for the EPA exercise 2016 only. Hence, in the EPA exercise 2016, the low level of the previous years is maintained.

The FP7 population of GAPs has been covered by two specific samples including cost claims of the years 2012 and 2013 (11%), which resulted in representative and residual error rates below 2% and hence did not indicate a significant risk for overpayments to Partners.

At the time of this report, the corrective measures for the 6 annual FP7 audit exercises carried out in the years 2011 to 2015 have been fully implemented with respect to the audited cost claims. The correction of systematic errors in unaudited cost claims pertaining to audits finalised until end of 2015 has also been fully achieved. The extrapolation of the most recent cases, related to the EPA

exercise of the year 2016, is still on-going and will be implemented until the closure of the FP7 program during the course of the year 2017.

The FP7 EPA coverage and identified error rates have to be evaluated with a view to the multiannual EPA strategy, which has evolved as an on-going process during the duration of the program from the beginning until now. Under this multi-annual aspect, we consider the accumulated results of the EPA process 2011 to 2016 relevant and appropriate to provide assurance for the operational expenditure as recognized in the Annual Accounts 2016.

#### **H2020 program:**

The accumulated audit coverage of the validated H2020 financial statements pertaining to GAMs for the years 2014 to 2015 is 16%.

The indicators established from the first H2020 sample covered in the current audit exercise, reflect a representative error in favor of CSJU in the validated operational expense of **-1.14%**.

Based on the representative error rate, the accumulated residual error rate, i.e. the error stemming from the audit exercise 2016 remaining after cleaning the population from systematic errors, amounts to **-0.95%**.

With a view to the moderate errors detected in the first H2020 audits we consider the level of assurance provided through these first audit results as sufficient for the reporting year 2016.

#### **Conclusion:**

Regarding the scope and the results of the EPA exercises 2011 to 2016, a reservation in the Assurance Declaration of the Executive Director for the Final AAR 2016 is not considered necessary.