



Verification Division
S/1240/2015
6 February 2015
Original: ENGLISH

NOTE BY THE DIRECTOR-GENERAL**REPORT ON THE PERFORMANCE OF THE REVISED METHODOLOGY FOR THE SELECTION OF OTHER CHEMICAL PRODUCTION FACILITIES FOR INSPECTION****BACKGROUND**

1. In 2011, the Director-General introduced—as an interim measure and on the basis of consultations within the Industry Cluster—a revised methodology to select other chemical production facilities (OCPFs) for inspection (S/962/2011, dated 8 September 2011).
2. Prior to using the revised methodology specified in S/962/2011, the Technical Secretariat (hereinafter “the Secretariat”) used a modified methodology (S/641/2007, dated 25 May 2007 and Corr.1, dated 4 June 2007) to select OCPFs for inspections that were conducted from 2008 to 2011.¹
3. At its Sixty-First Session, the Executive Council (hereinafter “the Council”) appointed Ambassador Fauziah Mohamad Taib and Ambassador Pieter de Savornin Lohman as the co-facilitators for a consultation on the OCPF site-selection methodology. The co-facilitators reported on this consultation to the Council at its Sixty-Fifth Session (EC-65/WP.1, dated 10 June 2011). In their report, the co-facilitators recommended that the Director-General modify the interim OCPF site-selection methodology (paragraph 9 of EC-65/WP.1) to better target OCPF inspections, without the need for States Parties to provide additional information in declarations (paragraph 5 of EC-65/WP.1). At the same session, the Council noted the report of the co-facilitators (paragraph 6.32 of EC-65/4, dated 15 July 2011) and reaffirmed that the Secretariat will report annually to States Parties on the performance of the interim OCPF site-selection methodology.
4. The Secretariat reported on the performance of the plant site selection (PSS) process using the S/962 methodology for inspections conducted in 2012 (S/1070/2013, dated 14 February 2013) and in 2013 (S/1157/2014, dated 10 February 2014).
5. This Note provides an overview of the performance of the S/962 methodology in its third year of implementation (for inspections conducted in 2014). For the purpose of making an assessment, the actual results achieved in 2014 have been compared to those of 2013 and 2012.

¹ A detailed comparison between the S/962 and the S/641 methodologies is given in the Annex to Note S/962/2011.



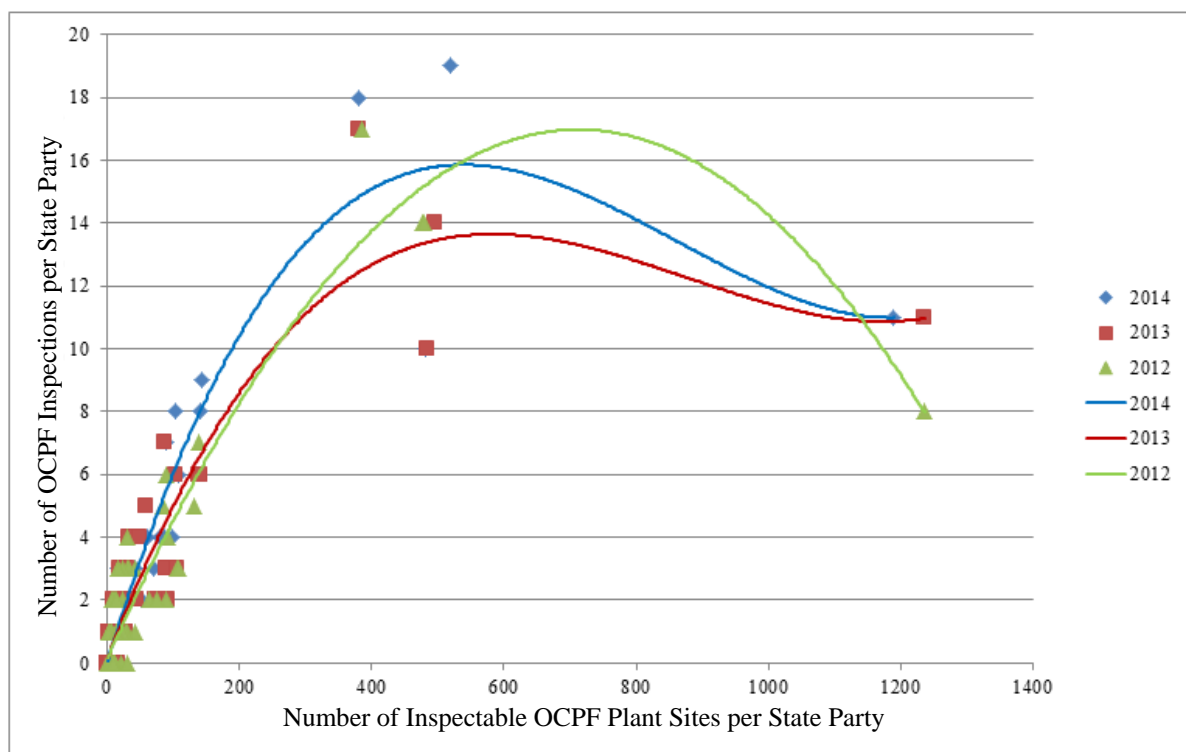
FINDINGS

- Using the PSS process based on the S/962 methodology, the Secretariat selected 169 OCPF plant sites which were budgeted for inspection in 2014.
- In general, the findings from the PSS results for 2014 show that the S/962 methodology achieves the combined objectives of maintaining a balanced geographical distribution and targeting OCPFs according to their level of relevance, which confirms that the effect of the revision to the methodology is positive.

Number of OCPF inspections per State Party

- The distribution of plant site inspections conducted in each State Party against the number of inspectable OCPF plant sites in that State Party is plotted in Figure 1 for the period 2012 to 2014. The data on the number of OCPF plant sites in each State Party is based on the information declared by States Parties. In 2014, the Secretariat conducted 169 OCPF inspections, 22 inspections more than in 2013, when 147 were carried out.

FIGURE 1: NUMBER OF OCPF INSPECTIONS PER STATE PARTY AGAINST THE TOTAL NUMBER OF INSPECTABLE OCPF PLANT SITES (2012 TO 2014)



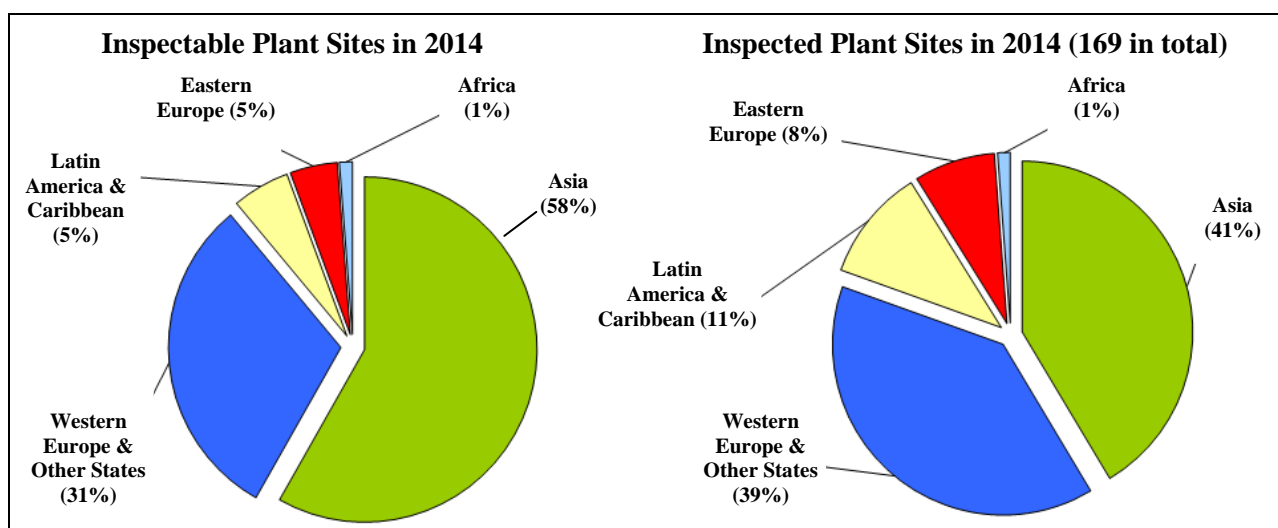
- In order to provide more clarity with respect to the methodology currently used, only the analysis for the last three years is included in Figure 1 above. The number of inspectable plant sites is presented on a linear scale, and a trend-line analysis is added to depict the correlation between the number of inspectable plant sites and the number of inspections received for the same three-year period.

10. From this analysis, several facts can be observed, which are common to all three years in the period:
- (a) the number of inspections conducted in each State Party is positively correlated with the number of declared OCPF plant sites in that State Party;
 - (b) according to the provisions of paragraph 13 of Part IX of the Verification Annex to the Chemical Weapons Convention (hereinafter “the Verification Annex”), within a State Party there is an upper limit to the combined number of inspections per year received under both Parts VIII and IX of the Verification Annex. While the selection of plant sites under both Parts of the Verification Annex is determined by a random selection process, in some States Parties the total number of inspections reached the limit in some years during the period, resulting in the reallocation of inspections to other States Parties; and
 - (c) the random selection process makes use of a probabilistic methodology that takes into account both the characteristics of the plant sites and the activities carried out there. Therefore, States Parties with a similar number of inspectable plant sites received a comparable number of inspections, but varying within a limited range. For instance, States Parties declaring between 55 and 150 plant sites received between three and nine inspections in 2014.

Geographical distribution of OCPF plant sites and inspections in 2014

11. The geographical distribution of plant sites and inspections among regional groups is shown in Figure 2. The chart on the left shows the share of inspectable plant sites in each regional group in 2014, based on the information declared by States Parties as at 6 November 2013. The chart on the right shows the share of inspections in 2014 conducted in each regional group, out of a total of 169 inspections.

FIGURE 2: COMPARISON OF THE REGIONAL DISTRIBUTION OF PLANT SITES AND INSPECTIONS (AS AT 6 NOVEMBER 2014)



12. By comparing the two distribution charts, the following conclusions can be drawn:
- (a) even though the PSS methodology does not include any mechanism for achieving an adequate regional balance, regions declaring a higher number of inspectable OCPF plant sites received a larger proportion of inspections in 2014;
 - (b) the vast majority of inspectable plant sites (about 90%) were declared by States Parties belonging to the Asian group and to the Western Europe and Other States Group (WEOG). Accordingly, States Parties located in these two regional groups received most of the total OCPF inspections carried out in 2014 (80%); and
 - (c) according to the provisions of paragraph 13 of Part IX of the Verification Annex, when, in some States Parties, the total number of sites selected for inspection in 2014 reached the threshold, inspections were reallocated to other States Parties according to the ordered probabilities of the selection process.

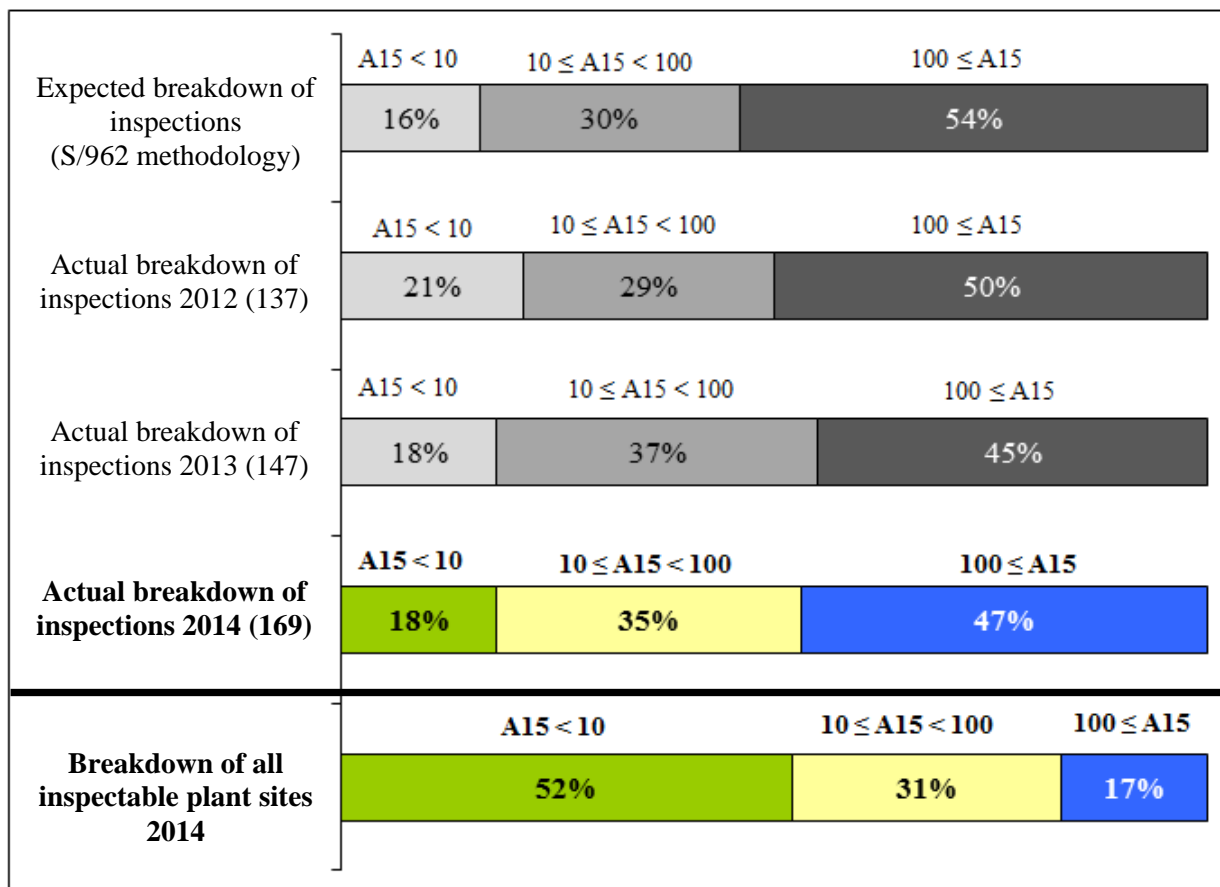
Distribution of OCPF inspections according to the relevance of plant sites

13. The distribution of plant sites according to relevance is compared in Figure 3, which describes the share of inspected OCPF plant sites each year from 2012 to 2014 in each of the low, medium and high relevance groups according to the A15² values for those years, as well as the breakdown of all inspectable sites in the pool for 2014 inspections according to the same criteria. The breakdown is shown according to the value of the A15, both in terms of the expected distribution according to the respective methodology and the actual selection of sites for inspection in each period.

2

A15 (formerly A14) is an algorithm that determines the relevance of an OCPF site for inspection, as defined in the current S/962 selection methodology.

FIGURE 3: RELATIVE SHARE OF INSPECTIONS ACCORDING TO THE RELEVANCE OF OCPF PLANT SITES

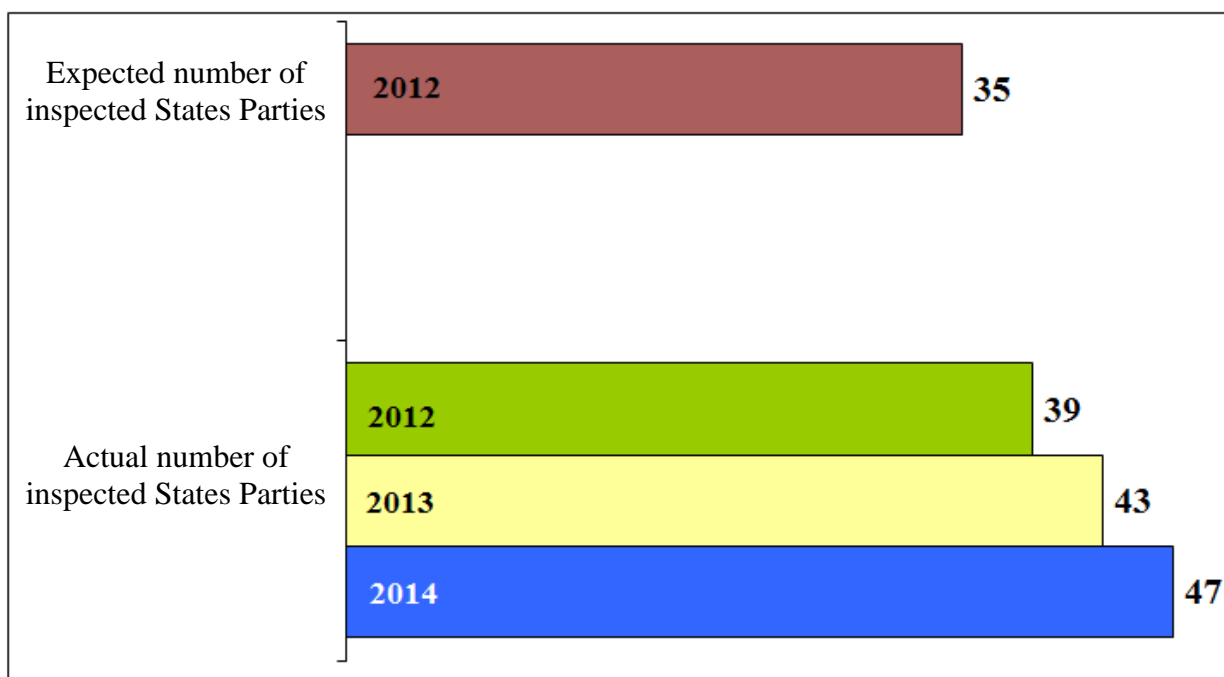


14. The evolution of the distribution over time and the characteristics of the pool of inspectable sites lead to the following observations:
- the S/962 methodology continues to result in the selection of relatively fewer OCPFs with low A15 values (i.e. lower relevance);
 - the S/962 methodology continues to result in the selection of relatively more OCPFs with higher A15 values (i.e. higher relevance);
 - the differences between the expected and the actual results can be attributed to the randomness of the selection and the effect of the provisions of paragraph 13 of Part IX of the Verification Annex, which limits the total number of inspections in any one State Party. The impact of this limitation is a consequent reallocation of inspections to plant sites with lower A15 values: slightly more plant sites in the medium relevance group were inspected than would be the case in absence of these provisions; and
 - concerning the distribution of all inspectable plant sites for 2014 inspections, the S/962 methodology targets the higher relevance sites; even though such sites constitute only 17% of all inspectable plant sites, 47% of the inspections were conducted at them.

Coverage of State Parties selected to receive inspections

15. The coverage of States Parties selected for OCPF inspection can be compared over time. Figure 4 shows the total number of States Parties actually inspected each year from 2012 to 2014 against the expected coverage according to the PSS methodology after it was defined.

FIGURE 4: COVERAGE OF STATES PARTIES SELECTED TO RECEIVE OCPF INSPECTIONS



16. The total number of States Parties that received OCPF inspections in 2014 was 47, a slight increase from 2013 (43 State Parties). Contributing factors that might have had an impact on this increase are:
- the three-pool approach of the one-step S/962 methodology: while the number of States Parties that declared at least one OCPF plant site has remained relatively stable in recent years (at around 80), the approach has the effect of increasing the coverage of State Parties in the selection of plant sites;
 - an increase in the number of budgeted annual OCPF inspections, in which 22 additional inspections were conducted in 2014;
 - an increase in the rate of subsequent (repeat) OCPF inspections, from 15% in 2013 to 20% in 2014; and
 - the limitation on the number of inspections as set out in the provisions of paragraph 13 of Part IX of the Verification Annex, which has the effect of distributing some inspections to other States Parties.

CONCLUSIONS

17. The analysis of the results from the PSS process to select OCPF plant sites for inspection in 2014 confirms that the use of the S/962 methodology takes into account both the number and the relevance of plant sites declared by States Parties. The key aspects of the selection results for 2014 are:
 - (a) the number of inspections conducted in each State Party is positively correlated with the number of declared OCPF plant sites in that State Party. States Parties that declare a higher number of OCPF plant sites can expect more inspections than those that declare fewer, within the limitations set by the Chemical Weapons Convention;
 - (b) the PSS process using the S/962 methodology continues to result in more inspections in highly relevant sites: relatively fewer OCPFs with low A15 values are being selected, and a higher proportion of more relevant plant sites with high A15 values are being selected. Hence, even though the high-relevance sites constituted only 17% of all inspectable sites for 2014 inspections, they represented 47% of all inspected sites; and
 - (c) a continued increase in the number of State Parties receiving inspections, which reflects (1) the effect of the three-pool approach in the selection methodology, (2) the increase in the rate of subsequent inspections, (3) an increased number of inspections carried out in the past few years, and (4) the impact of the limitation on the number of inspections according to paragraph 13 of Part IX of the Verification Annex.
18. In conclusion, the PSS process using the S/962 methodology continues to achieve the goals set forth in the report of the co-facilitators (EC-65/WP.1), namely, to better target OCPF inspections without the need for State Parties to provide additional information in declarations.