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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. In line with the recommendation of the co-facilitators for the consultation on the site selection methodology for OCPFs, contained in their report to the Executive Council (hereinafter “the Council”) at its Sixty-Fifth Session (EC-65/WP.1, dated 10 June 2011) and with the reaffirmation by the Council in its report of that same session (paragraph 6.32 of EC-65/4, dated 15 July 2011), the Technical Secretariat (hereinafter “the Secretariat”) reports annually to States Parties on the performance of the interim OCPF site selection methodology.
3. The previous reports on this topic are contained in Notes by the Secretariat S/1070/2013, dated 14 February 2013; S/1157/2014, dated 10 February 2014; and S/1240/2015, dated 6 February 2015.
4. This Note provides an overview of the performance of the methodology specified in S/962 in its fourth year of implementation (for inspections conducted in 2015). For the purpose of making an assessment, the actual results achieved in 2015 have been compared to those of 2014 and 2013.

FINDINGS

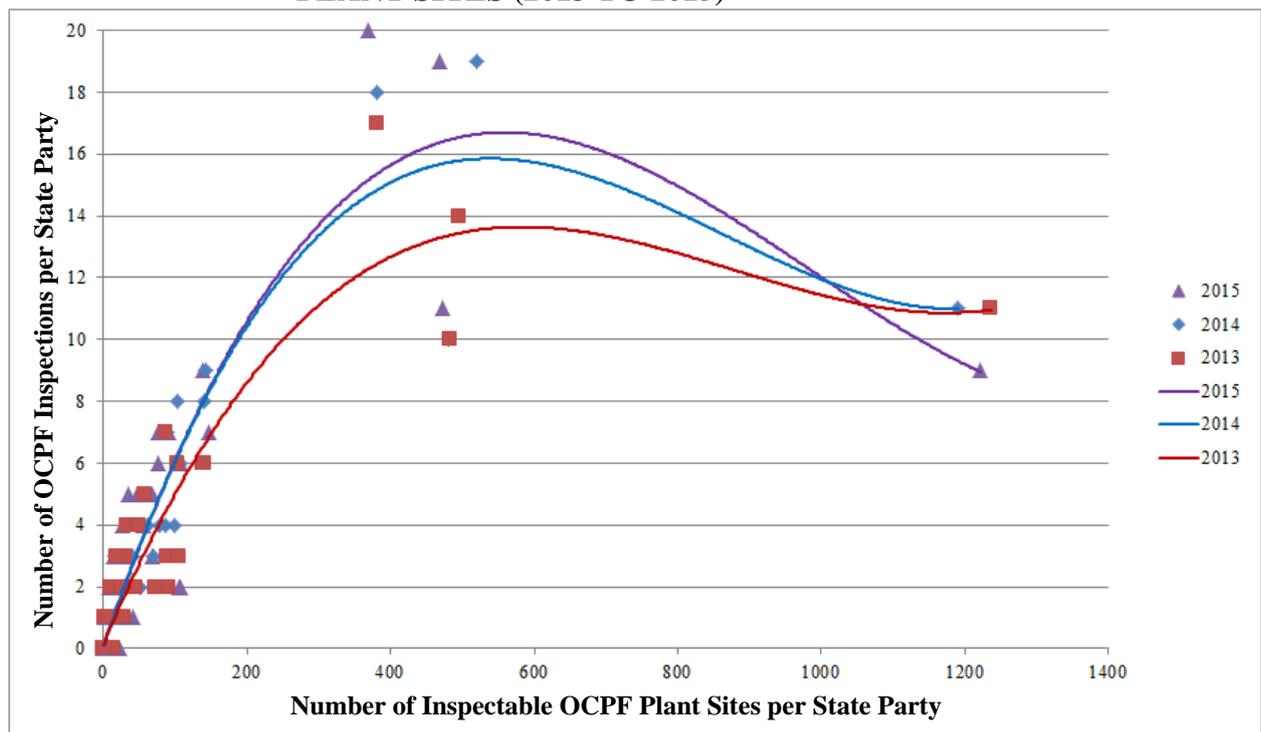
5. Using the plant site selection (PSS) process based on the S/962 methodology, the Secretariat selected 169 OCPF plant sites which were budgeted for inspection in 2015.
6. In general, the findings from the PSS results for 2015 show that the S/962 methodology achieves the combined objectives of maintaining 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

7. 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 below for the period 2013 to 2015. The data on the number of OCPF plant sites in each State Party is based on the information declared by States Parties. In 2015 as 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 (2013 TO 2015)



8. 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 OCPF 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.
9. From this analysis, several facts can be observed, which are common to all three years:
- (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 (Schedule 3) and IX (OCPF) of the Verification Annex. While the selection of plant sites under

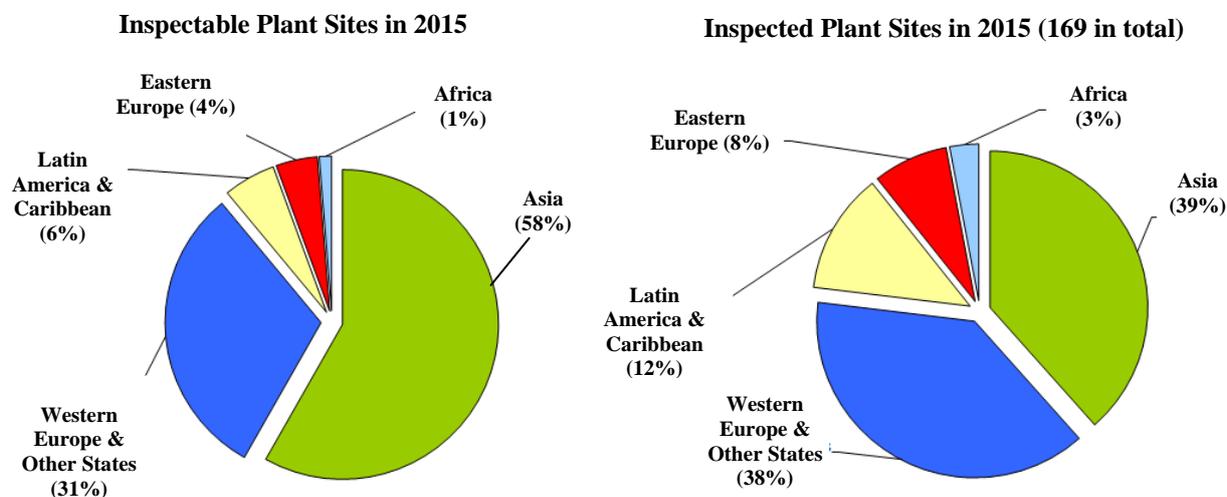
both Parts of the Verification Annex is determined by a random selection process, in some States Parties the total number of inspections reached the limit, causing the reallocation of inspections to other States Parties and subsequently distorting the positive correlation for the higher end of the graph; 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 two and nine inspections in 2015.

Geographical distribution of OCPF plant sites and inspections in 2015

10. The geographical distribution of plant sites and inspections among regional groups is shown in Figure 2 below. The chart on the left shows the share of inspectable plant sites in each regional group in 2015, based on the information declared by States Parties as at 18 November 2014. The chart on the right shows the share of inspections in 2015 conducted in each regional group, out of a total of 169 inspections.

FIGURE 2: COMPARISON OF THE REGIONAL DISTRIBUTION OF PLANT SITES AND INSPECTIONS (BASED ON THE INFORMATION DECLARED BY STATES PARTIES AS AT 18 NOVEMBER 2014)



11. 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 2015;
- (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

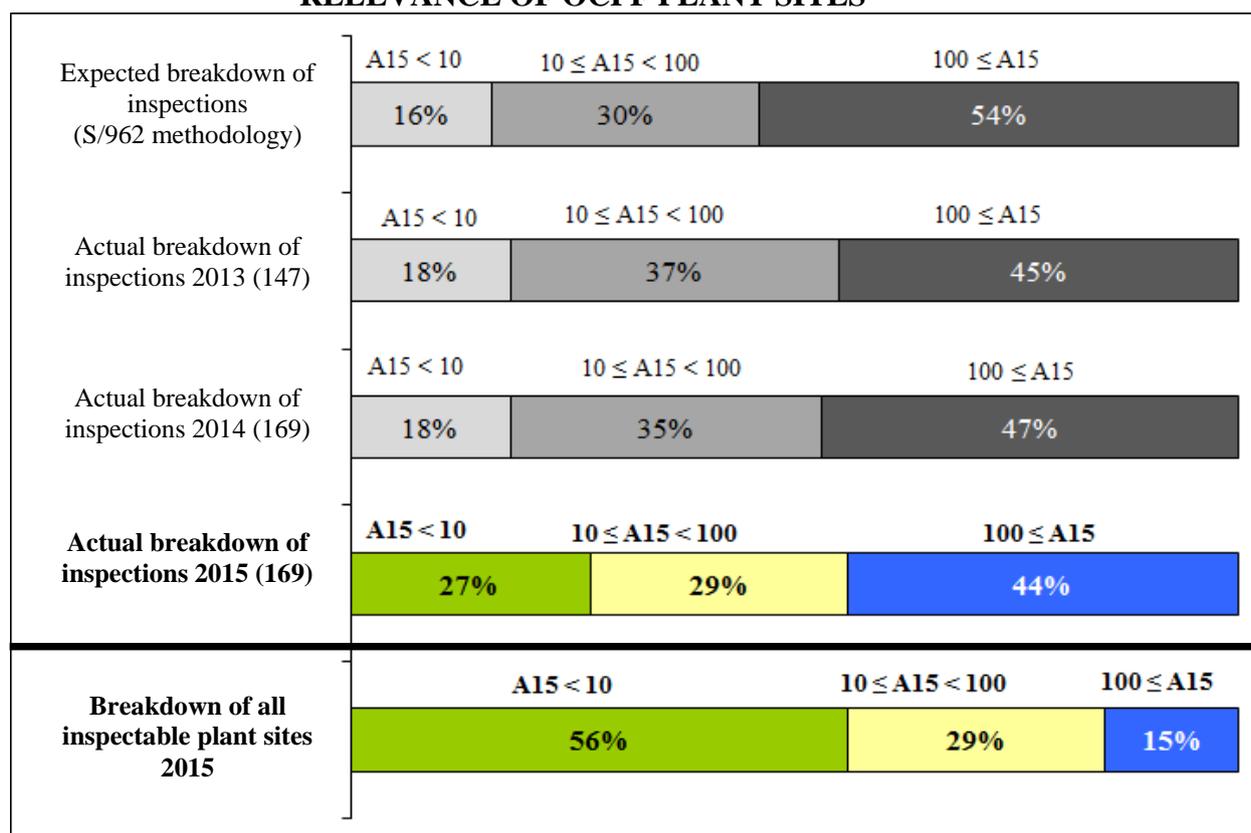
regional groups received most of the total OCPF inspections carried out in 2015 (about 80%); and

- (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 2015 reached the threshold, inspections were reallocated to other States Parties according to the order of the selection process.

Distribution of OCPF inspections according to the relevance of plant sites

- 12. The distribution of plant sites according to relevance is compared in Figure 3 below, which describes the share of inspected OCPF plant sites each year from 2013 to 2015 in each of the low-, medium- and high-relevance groups according to the A15¹ values for those years, as well as the breakdown of all inspectable sites in the pool for 2015 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.

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



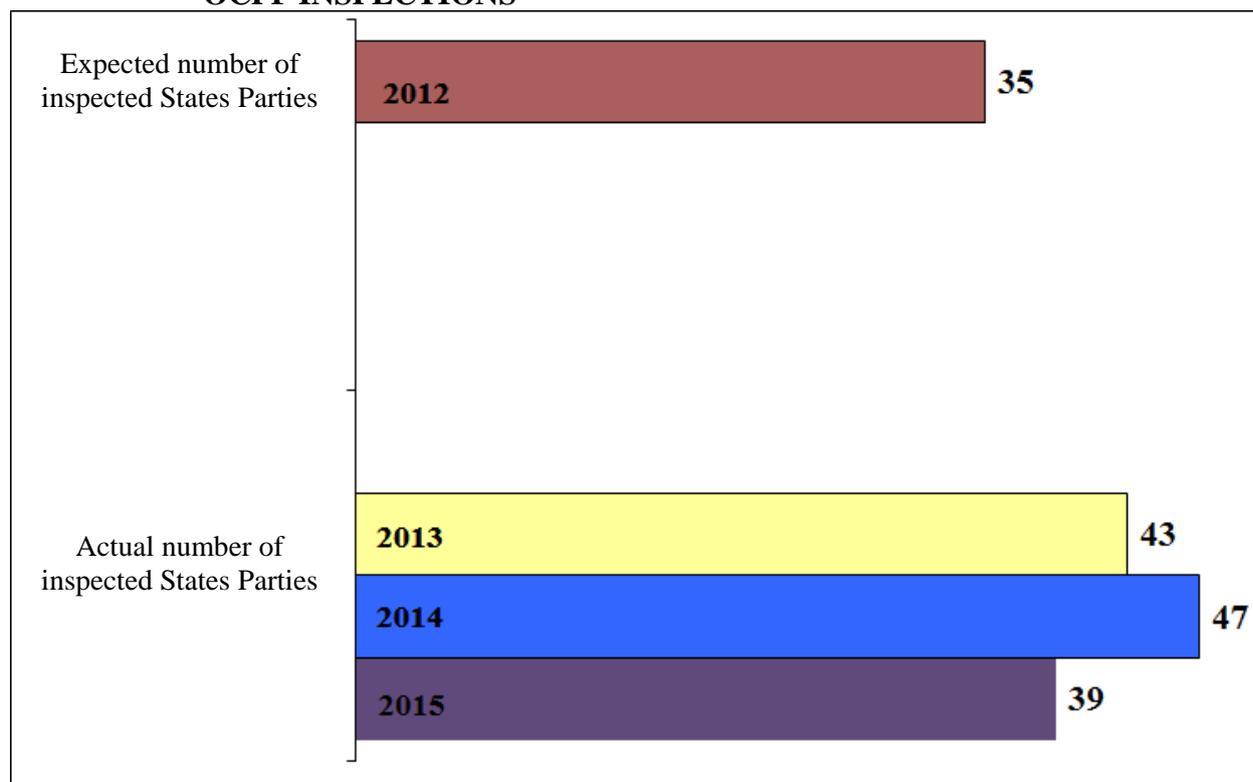
¹ A15 (formerly A14) is an algorithm that determines the relevance of an OCPF site for inspection, as defined in the current S/962 selection methodology.

13. The evolution of the distribution over time and the characteristics of the pool of inspectable sites lead to the following observations:
- (a) the S/962 methodology continues to result in the selection of relatively fewer OCPFs with low A15 values (i.e. lower relevance);
 - (b) the S/962 methodology continues to result in the selection of relatively more OCPFs with higher A15 values (i.e. higher relevance);
 - (c) 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;
 - (d) concerning the distribution of all inspectable plant sites for 2015 inspections, the S/962 methodology targets the higher-relevance sites; even though such sites constitute only 15% of all inspectable plant sites, 44% of the inspections were conducted at them; and
 - (e) the difference in the distribution of inspections between 2014 and 2015, visible mainly for the low-relevance sites, could be attributed to the changes in the characteristics of the selection pools, primarily for the following reasons:
 - (i) since a greater percentage of inspections are conducted in high-relevance sites within a given year, the number of non-inspected high-relevance sites is reducing each year;
 - (ii) as a result of the initial implementation of the alternative approach to verification at mixed plant sites (S/1202/2014, dated 23 July 2014), several mixed plant sites that were not inspected under the OCPF regime but have received inspections under another regime were moved to the pool of inspected sites, further reducing the number of non-inspected sites with high relevance; and
 - (iii) since the selection methodology for the inspected sites was not altered by the S/962 methodology, which effectively places all inspected sites into a single pool, relatively more sites with low A15 values (38%) were selected from this pool.

Coverage of States Parties selected to receive inspections

14. The coverage of States Parties selected for OCPF inspection can be compared over time. Figure 4 below shows the total number of States Parties actually inspected each year from 2013 to 2015 against the expected coverage according to the PSS methodology after it was defined.

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



15. The total number of States Parties that received OCPF inspections in 2015 was 39, a decrease from 2014 (47 States Parties) but nevertheless above the expected number of 35. This may be explained by the variation in the number of States Parties with non-inspected sites (52 in 2014 compared to 49 in 2015).

CONCLUSIONS

16. The analysis of the results from the PSS process to select OCPF plant sites for inspection in 2015 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 2015 are as follows:
- (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 15% of all inspectable sites for 2015 inspections, they represented 44% of all inspected sites;

- (c) the impact of targeting the high-relevance sites and the implementation of the alternative approach to verification at mixed plant sites is visible through the changes in the characteristics of the selection pools and the distribution of the inspections for 2015; and
 - (d) a reduction in the number of States Parties receiving inspections was observed in 2015 compared to 2014 and 2013, which can be attributed to the variations in the number of States Parties with non-inspected plant sites, rather than a trend.
17. 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 States Parties to provide additional information in declarations.

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