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## **POPs - a summary of information about remaining stocks of the organochlorine insecticides aldrin, dieldrin and endrin**

**June 2010**

*The following information has been provided by Shell Chemicals Limited, London. Shell<sup>1</sup> was the only manufacturer of aldrin and dieldrin, and was one of only two manufacturers of endrin (the other being Velsicol Chemical Corporation). For convenience in this note the 3 insecticides are jointly referred to as the “drins”. As part of its product stewardship programme, Shell maintains a database of known remaining stocks of drins held by third parties. It also actively pursues the safeguarding and disposal of significant remaining stocks, usually in close association with CropLife International or expert agencies such as GTZ, the German Government Agency for Technical Cooperation.*

*Aldrin, dieldrin and endrin are three of the first nine pesticide POPs listed in the Stockholm Convention. It is 20 years since the last of these three products (aldrin) was manufactured. No stocks of any of the drins are held by Shell companies. According to available records, national governments of 24 countries currently hold a combined total of around 105 tonnes of stocks containing drins, mainly in India, Nepal and several African countries. If the weights of the inert formulation ingredients (such as solvents and solid diluents) are excluded, then the total drins active ingredient content of these stocks is less than 50 tonnes. Current or planned projects should result in the destruction of around 86% of the listed stocks during the next 2 years. 2010 saw the completion of a project in Cameroon that resulted in the disposal of 2.4 tonnes of a product containing dieldrin.*

### **Historical information**

- The dates at which the active ingredients were last manufactured by Shell were:
  - Endrin – 1981
  - Dieldrin – 1987
  - Aldrin - 1990
- Aldrin, dieldrin and endrin were formulated as both solids and liquids, with a wide range of concentrations. Dieldrin formulations for locust control (the main products remaining as obsolete stocks) contained typically between 50 and 200 g/l of dieldrin active ingredient.
- The dates of the last sales of *drins* products (including formulations) by Shell in any country were:
  - Endrin – 1987
  - Aldrin and dieldrin - 1991
- Sales for locust control and disease prevention were usually via aid agencies and UN organisations
- Shell withdrew completely from the crop protection business in 1993

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<sup>1</sup> The Shell Group of Companies is a global group of energy and petrochemical companies and in this document the term Shell is used for convenience to denote one or more companies within the Group

## **Current stocks summary (all are held by national authorities)**

### **Drins stocks disposal status - June 2010**

<b>Country</b>	<b>Tonnes</b>	<b>Approx global %</b>	<b>Comments</b>
India	49.0	47	Shell/GTZ/Government of India Public/Private Partnership disposal project in progress and completion expected in 2011
Nepal	28.0	27	Shell/GTZ/Government of Nepal Public/Private Partnership project in progress and completion expected in 2011
Tanzania	2.5	2	Africa Stockpiles Programme - Phase 1 – completion expected 2011
Ethiopia	9.0	9	National project in progress - disposal completion expected during 2010/2011
Eritrea	6.4	6	The stocks were not confirmed in a recent inventory, possibly due to difficulty of access within a store. Verification expected during 2010.
Pakistan	4.4	4	Data from an early 2000 partial national inventory and forms a small part of a reported much larger obsolete stock problem - no known national plans
Algeria	1.3	1	Project discussions in progress
Tunisia	0.6	1	Africa Stockpiles Programme - Phase 1 – completion expected 2011
Countries with minor stocks	3.5	3	17 countries – most of the data come from very old inventories
<b>Approx total</b>	<b>105</b>	<b>100</b>	

#### Notes:

1. The above data are based on multiple sources.
2. Since the last summary published in April 2009, new inventories have found:
  - o For Tanzania there are around 2.5 tonnes of drins compared with a previous estimate of over 15 tonnes
  - o For Morocco there are 56 kg of drins compared with a previous estimate of around 2 tonnes.
3. Shell has had an active involvement in obsolete stocks disposal projects for national governments since 1990 (the first was the joint USAID/GTZ/Shell dieldrin disposal project for Niger). Between 1990 and 2010, around 650 tonnes of products containing *drins* have been safely destroyed in some 19 disposal projects. Shell contributed financial and/or technical and facilitation support to over half of these. Shell will continue to contribute to such projects until all significant stocks of *drins* have been collected and destroyed.