

## Format for submitting pursuant to Article 8 of the Stockholm Convention the information specified in Annex E of the Convention

Introductory information	
Name of the submitting Party/observer	World Wild Fund for Nature (WWF)
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Chemical name (as used by the POPS Review Committee (POPRC))	Chlordecone
Date of submission	January 25, 2006

(a) Sources, including as appropriate (provide summary information and relevant references)	
(i) Production data:	
Quantity	
Location	
Other	
(ii) Uses	
(iii) Releases:	
Discharges	
Losses	
Emissions	
Other	

(b) Hazard assessment for endpoints of concern, including consideration of toxicological interactions involving multiple chemicals (provide summary information and relevant references)
<ul style="list-style-type: none"> <li>• Chlordecone bioaccumulated in fish can potentially impair reproduction or development via estrogenic actions. Chronic dietary exposure to Chlordecone in juvenile rainbow trout elevated plasma vitellogenin and resulted in relatively high hepatic Chlordecone concentrations. It is a weakly estrogenic in juvenile trout. (Donohoe and Curtis 1996);</li> <li>• Chlordecone can enhance the toxicity of other substances. A study shows that carbon tetrachloride (CCl<sub>4</sub>)-induced mortality increased from 25% to 80% (when administrated with cochicine) in Chlordecone pretreated postnatal rats comparing to 100% survival in normal diet rats (Abraham D. et al. 1998). It also contributes to the escalation of liver injury in mice when treated with Chlordecone and CCl<sub>4</sub> (Murali et al 2004). Chlordecone also plays a role in modifying polycyclic aromatic hydrocarbon-induced carcinogenesis in fish. The postinitiation exposure to Chlordecone at low dose can weakly enhance DMBA-induced hepatic tumor incidence in rainbow trout (Regina et al 1998);</li> <li>• Chlordecone disrupts cellular architecture which may ultimately affect cellular phenotype (Starcevis et al 2001);</li> </ul>

<b>(c) Environmental fate (provide summary information and relevant references)</b>	
<b>Chemical/physical properties</b>	
<b>Persistence</b>	
<b>How are chemical/physical properties and persistence linked to environmental transport, transfer within and between environmental compartments, degradation and transformation to other chemicals?</b>	
<b>Bio-concentration or bio-accumulation factor, based on measured values (unless monitoring data are judged to meet this need)</b>	

<b>(d) Monitoring data (provide summary information and relevant references)</b>

<b>(e) Exposure in local areas (provide summary information and relevant references)</b>	
<b>- general</b>	
<b>- as a result of long-range environmental transport</b>	
<b>- information regarding bio-availability</b>	

**(f) National and international risk evaluations, assessments or profiles and labelling information and hazard classifications, as available (provide summary information and relevant references)****(g) Status of the chemical under international conventions****References:**

Dalu, A., Rao, P.S., and Mehendale, H.M. (1998) Colchicine Antimitosis Abolishes Resiliency of Postnatally Developing Rats to Chlordecone-amplified Carbon Tetrachloride Hepatotoxicity and Lethality. *Environmental Health Perspectives* Volume 106, Number 9, September 1998, available at <http://ehp.niehs.nih.gov/realfiles/members/1998/106p597-606dalu/dalu-full.html>.

Donohoe, R.M. and Curtis, L.R. (1996) Estrogenic activity of chlordecone, o,p'-DDT and o,p'-DDE in juvenile rainbow trout: induction of vitellogenesis and interaction with hepatic estrogen binding sites. *Aquatic Toxicology*, Volume 36, Number 1, November 1996, pp. 31-52(22), available at <http://www.ingentaconnect.com/search/expand?pub=infobike://els/0166445x/1996/00000036/00000001/art00799&unc>.

Donohoe, R.M., Zhang, Q., Siddens, L.K., Carpenter, H.M., Hendricks, J.D., and Curtis, L.R. (1998) Modulation of 7,12-Dimethylbenz[a]Anthracene Disposition and Hepatocarcinogenesis by Dieldrin and Chlordecone in Rainbow Trout. *Journal of Toxicology and Environmental Health Part A* Volume 54, Number 3 / June 1, 1998. page 227 – 242, available at [http://journalonline.tandf.co.uk/\(0vqhv1j5nc2qhvq1nhf4rzae\)/app/home/contribution.asp?referrer=parent&backto=issue\\_5\\_5;journal\\_163\\_196;linkingpublicationresults\\_1:100675\\_1](http://journalonline.tandf.co.uk/(0vqhv1j5nc2qhvq1nhf4rzae)/app/home/contribution.asp?referrer=parent&backto=issue_5_5;journal_163_196;linkingpublicationresults_1:100675_1).

Starcevic, S.L., Bortolin, S., Woodcroft, K.J., and Novak, R.F. (2001) Kepone (chlordecone) disrupts adherens junctions in human breast epithelial cells cultured on matrigel. *In Vivo*. 2001 Jul-Aug;15(4):289-94, available at [http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list\\_uids=11695219&dopt=Citation](http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list_uids=11695219&dopt=Citation).

Murali, B., Korrapati, M.C., Warbritton, A., Latendresse, J.R., Mehendale, H.M. (2004) Tolerance of aged Fischer 344 rats against chlordecone-amplified carbon tetrachloride toxicity. *Mech Ageing Dev*. 2004 Jun; 125(6):421-35, available at [http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list\\_uids=15178132&dopt=Citation](http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list_uids=15178132&dopt=Citation).