



Embargoed: 00.01 am 24th February 2013

Press Release

Hormone disrupting chemicals linked to problems in reproductive health of male otters

- Chemicals linked to decrease in weight of otters' penis bone, an increase in cysts on reproductive tubes and undescended testicles

A new **CHEM Trust** (Chemicals, Health and Environment Monitoring Trust) report, co-authored by the Cardiff University Otter Project, has highlighted serious concerns for the health of otters in the UK.

The otter is one of our best loved, most charismatic, top predator species and research indicates that they may not be in the best of reproductive health. This raises the question as to whether modern chemicals - particularly endocrine disrupting chemicals (EDCs - also called hormone disruptors) - could be to blame.

High levels of POPs (persistent organic pollutants) probably caused a crash in otter populations in the UK in the 1970s. The Environment Agency have funded post mortem examination of otters found dead in England and Wales since the 1990s, and analysis of tissue samples for POPs, revealing a gradual decline in POPs over time, as otter populations have increased.

However, the current report shows that despite the population increase, male otters in particular are showing worrying signs of change in their reproductive organs.

The report, co-authored by Cardiff University Otter Project (CUOP) and CHEM Trust, entitled; ***Persistent organic pollutants and indicators of otter health: other factors at play?*** is written by two of the UK's leading researchers on otters: Dr Elizabeth Chadwick and Dr Eleanor Kean.

The researchers looked at several indicators of male reproductive health and found several signs of change that give cause for concern:

- A decrease in penis bone (baculum) weight over time
- An increase in cysts on the tubes that carry sperm during reproduction (vas deferens)
- An increase in undescended testicles (cryptorchidism)

It is not possible to determine exactly what the causes of these changes are, but various studies, both in the laboratory and in wildlife, have suggested links between hormone disrupting chemicals and problems with male reproductive health.

Dr Kean stated “*The otter is an excellent indicator of the health of the UK environment, particularly aquatic systems. Our contaminant analyses focused on POPs that were banned in the 1970s, but which are still appearing in otter tissues now – other chemicals, in current usage, are not yet being monitored in wildlife. There is a clear need to regularly revise the suite of contaminants measured – failure to do so may lead to a false sense of security and cause emerging threats to otters and UK wildlife to be missed*”.

It is recommended that monitoring of pollutants and health in top predators such as the otter should be expanded in the UK and EU. Given the broader knowledge of the role of EDCs in reproductive health, particular attention should be paid to these chemicals, and the reproductive health of top predator species. Further, additional and more sensitive indicators need to be investigated, to give a broader picture of health of the otter and that of the UK’s freshwater environment.

Gwynne Lyons, CHEM Trust stated “*If we are to protect our wildlife, we need good information on the reproductive health of key species in both the terrestrial and aquatic environments. Surely in the 21st century that is not too much to ask? These findings highlight that it is time to end the complacency about the effects of pollutants on male reproductive health, particularly as some of the effects reported in otters may be caused by the same EDCs that are suspected to contribute to the declining trends in men’s reproductive health and cause testicular cancer, undescended testes and low sperm count. This study has raised a warning flag. In reality humans and wildlife are exposed to a cocktail of many chemicals every day and some may be adding up to cause problems. How EDCs are managed in the EU is now up for grabs as discussions are now on-going amongst EU experts. However, unfortunately the UK wants to limit the number of EDCS that are effectively regulated.*”

This study points in the same direction as research in humans, with increased numbers of baby boys born with undescended testicles, malformation of the penis and reduced sperm counts.

CHEM Trust is calling for the UK Government and the EU to urgently identify hormone disruptors to ensure that chemicals suspected of playing a role in male reproductive health problems are substituted with safer alternatives.

END

For more information contact:

Elizabeth Salter Green Tel: 01823 619002 Mob: 07976 273157

Email: elizabeth.saltergreen@chemtrust.org.uk

Tomas Llewelyn Barrett Tel: 02920 875596

Email: BarrettTL1@cardiff.ac.uk



Notes to Editors:

1. CHEM Trust (Chemicals, Health & Environment Monitoring Trust)

www.chemtrust.org.uk, is a science-based charity with the aim of protecting humans and wildlife from harmful chemicals. CHEM Trust makes the links between chemicals and disease more widely understood and seeks to improve chemicals regulation and health protection

2. **The Report: *Persistent organic pollutants and indicators of otter health: other factors at play?*** is available on the CHEM Trust website www.chemtrust.org.uk (at 00.01hrs, 24th February 2013).

3. **The Cardiff University Otter Project (CUOP)** has received funding from the Environment Agency (EA) since 1992 to conduct post-mortem examinations of otters found dead in England and Wales. Numbers found each year have steadily increased and CUOP have, to date, examined over 2000 otters from all over the UK, predominantly killed in road traffic accidents - www.otterproject.cf.ac.uk

4. Additional chemicals to be looked at in otters

The range of pollutants currently under surveillance in top predators is very limited and should be expanded. Associated funding needs to be made available. Suggested additions include

- chemicals already listed on the Stockholm Convention (2001), that are not currently monitored in otters e.g. perfluorooctane sulphonic acid (PFOS), its salts and perfluorooctane sulphonyl fluoride PFOS-F
- other chemicals which are sufficiently persistent and bioaccumulative to be of very high concern, but have not yet been proposed for listing or would not meet all the criteria of the Stockholm Convention (2001) e.g. musk xylene, and
- non highly bioaccumulative pollutants which may also affect health, particularly including contaminants with endocrine disrupting properties eg certain phthalates, bisphenol A, 4-tertiary-octylphenol.

ENDS