COMET workshop

KIEV, August 30-31

An NGO perspective
RADIATION FROM CHERNOBYL

KiloBecquerels (KBq) per square metre
- more than 1,480
- 185 to 1,480
- 40 to 185
- 10 to 40
- 2 to 10
- less than 2
- No data
- Chernobyl plant


Chernobyl health impacts:

Rise of **cancer**, not only thyroid, but also leukemia, breast cancer and other cancers

Rise of **non-cancer diseases** (exceeds the cancer cases) - blood system, stroke and heart attack, thyroid – endocrinological diseases, (Basedow, Hashimoto, Diabetes), lens diseases

**Genetic effects**: congenital malformations, rise in perinatal mortality, rise of stillbirth
Chernobyl-related cancers:

**Clean-up workers**: increase in cancer by 20% (Okeanov, 2004)

increase in acute and of chronic lymphatic leukemia (Zablotska et al, 2012), increase in thyroid cancer (Kesmiene et al, 2012)

Gomel region, Belarus: increase in cancer rate by 55.9%

Belarus overall: 40% (Okeanov et al. 2004)

Increase in **breast cancer** in contaminated areas Gomel + Mogilov (Belarus) and Chernigov, Kiev, Zhytomir (Ukraine), (Pukkala et al. 2006)

Increase in **leukaemia** (children) in contaminated areas of Ukraine:
Significant if the contamination is higher than 10 mSv (Noshenko, 2010) and Belarus (A. Körblein 2013) for babies in the first year after Chernobyl

Increase in number of **brain tumours** for children under 6 years (Ukraine) 5.8 fold (Orlov, Sharevsky, 2002)
Recommendations

- Estimation of health effects on humans and wildlife can only be as accurate as the baseline data.
- Need to have set up CHERF (and/or extend RERF in Japan) and be ready for the next accident.
- Funding is needed for scientific effort to document range of biological consequences.
- Need to appreciate “inconvenient truths.”
Acknowledgements

- *Greenpeace* - reports
- *IPPNW* reports and conversations (Angelika Claussen)
- *Low Level Radiation and Health Conferences* (1st workshop on Radioactivity and wildlife led by Dr Janet Rowe, Bristol University, 1991) and *Beyond Nuclear* events held in London and Manchester March 2016 to mark the anniversaries of the nuclear accidents, 30th at Chernobyl and 5th at Fukushima
- *Prof. Tim Mousseau*, South Carolina University
- TORCH Report 2006 and 2016, *Dr Ian Fairlie*

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**Chernobyl**

- Reinstate monitoring programmes
- Involve affected population
- Close off highly contaminated areas and clearly mark them
- Decontaminate areas near highly populated areas

**Fukushima**

- Systematic health check ups for all
- Clean up workers
- All evacuees
- Population staying in contaminated zones
- Impacts on marine life of radioactivity around Japan and US (Buessler)

Need summary of effects on wildlife as currently known and understood