

# Developing Risk-Based Priorities for Reducing Air Pollution in Ukraine

Michael Brody<sup>1</sup>, Jane Caldwell<sup>1</sup>, Alexander Golub<sup>2</sup>

<sup>1</sup> US Environmental Protection Agency, <sup>2</sup> Environmental Defense

## Ukraine: Current Status



### Population in 2000

- 49.5 million

### GDP in 2000

- 33.4 billion USD1995

### Area

- 604,000 square km

## Russian Example for Screening Assessment

- Significant US EPA training in risk assessment;
- Qualified epidemiologists, long-term experience of air dispersion modeling, modest requirements for input data, and clear and understandable results;
- Health risk analysis in Russia- pilot stage 1996-1998;
  - Successively implemented in 6 cities
  - Results were broadly published
- Russian government officially recognized the method.

## Air Pollution Management in Ukraine

- Based on the Soviet system of standards;
- Too many controlled pollutants;
- No prioritization;
- Almost no economic incentives for private sector to reduce emissions;
- Small level of state environmental protection expenditures.

## Programs and Limitations

- |        |   |
|--------|---|
| 1980's | <ul style="list-style-type: none"><li>• Ambient and Emission standards</li><li>• Complicated system of pollution permits with too many pollutants</li></ul>   |
| 1991   | <ul style="list-style-type: none"><li>• Pollution fees to create environmental funds</li><li>• Environmental funds were small, fees did not keep pace with inflation<ul style="list-style-type: none"><li>➢ IMF criticizes "off-budget" funds</li></ul></li></ul> |

## Reforms Needed

- Nature and scope of pollution problem needs to be defined;
- Identification and prioritization of risks lacking;
- Efficient risk management approaches to be determined;
- Incentives needed for polluter to reduce emissions. Steps Towards Reform

## Steps Towards Reform

- Partnership between USEPA and Ukrainian environmental protection authorities;
- Capacity building project (CPB);
- Use screening human health risk assessment for prioritization;
- Apply western methods, share experiences for risk analysis for Ukraine;
- Utilize experience in other NIS countries.

## CPB Draws Upon:

- Analytical tools, information, expertise of the US EPA;
- Approaches used in Europe (e.g., EU Tacis, Denmark) and technical assistance programs in Ukraine;
- Work of multi-lateral organizations such as the Organization of Economic Cooperation and Development (OECD);
- Relevant experience and tools from neighboring countries (Russia, and Poland).

## Russian Health Risk Analysis 1998 - 2002

- Health risk resulted from industrial pollution in Russia was analyzed in up to 20 cities;
  - Volgograd, Novokuznetsk, Perm, Angarsk, Krasnouralsk, Ekaterinburg, Samara, Novokuibyshevsk, Velikii Novgorod, Voronezh, Serpukhov, Moscow, Klin, Cherepovets, Verkhniaa Pzhdma, Orenburg and others
- Carcinogenic and non-carcinogenic risk;
- Stationary and mobile pollution sources;
- From air pollution to multimedia health risk analysis based on USEPA methods and standards.



Air Pollution in Ukraine

## CPB – Beginning the Process

- Broad consultations –kick-off seminar
  - Build understanding of the approach by illustrating many of the principles of modern environmental policy
  - Facilitate partnership and to exchange experience between the two governments and share best practices available in multilateral international institutions, academic and NGOs
- Pilot cities for risk analysis
  - Zaporizhzhia
  - Kharkiv
- Bridge to policy making
  - Prioritization and environmental finance
  - Modernization of air pollution management system

## Next Steps for CPB

- Acquire official emissions data for Zaporizhzhia and Kharkiv oblasts;
- Digitize available population data;
- Model dispersion of emissions;
- Screening-level cancer and non-cancer risk assessments;
- Risk-based priorities based on USEPA and WHO standards.
- Comparative Risk Assessment:
  - Identification of risk reduction opportunities that provide the greatest health benefits;
- Use of economic analysis to support efficient decisions;
- Encourage use of national pollution fee-based environmental funds to pay for high priority opportunities.

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