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Prospective impact assessment as a tool for *Agenda 21* and Environmental Health action plans – Typology and criteria exemplified by 10 examples

I. Goal and scope. Environmental Health Impact Assessment (EHIA), together with surveillance activities, stands between basic research on one side and environmental and health protection / promotion on the other. The need for EHIA is clearly stated in numerous documents incl. *Agenda 21* and the European Action Plan of 2nd Ministerial Conference on Environment and Health 1994. More recently this request has been strengthened by governments of Europe in the declaration of 3rd Ministerial Conference on Environment and Health 1999 in London, the Charter on Transport, Environment and Health adopted at the same conference, and by the 1998 Amsterdam treaty of European Union which requests that human health be insured in the definition and implementation of all Union policies. - This paper aims to develop a draft typology, to outline some quality criteria and exemplify these concepts using 10 examples of impact assessment.

II. Methods. The theory and practice of impact assessments are evolving both within the framework of Environmental Impact Assessment and outside of it. There is a whole range of approaches and sample applications, calling for stock-taking and critical evaluation. We present a draft typology of EHIA including the directionality, project/plan/program/policy level, linkage with surveillance and reporting routines, and the respective legal & organizational framework. Several levels of complexity of impact assessment can be distinguished, ranging from improvised modes to qualitative and quantitative approaches and to an integrated approaches with a common metric. Quality criteria include transparency, objectivity, model validity, completeness of outcomes, and adequate coverage of uncertainty and variation. It is attempted to apply the typology and the quality criteria to publicly accessible examples of impact assessments.

III. Results and Conclusions.. The examples selected from different fields include the following projects: extensions of the Manchester (UK) and Schiphol (Netherlands) airports; construction of the Rotherham Sheffield motorway corridor (UK) and the Livorno – Civitavecchia (Tuscany, Italy) highway; the Franco-Spanish Tunnel of Somport project; and the extension of an existing waste disposal facility in Germany. Several of these examples are based on information from the Pan European Network of Environmental Legislation Observatories for Planning, Education and Research (PEN-LOPE). Also included are impact assessments of policies, i.e. the EU agricultural policy (from Sweden) and the privatization of drinking water provision (Germany). These examples represent a broad scope of impact assessments, conducted within different legal and organizational frameworks and utilizing widely different methodologies. While, at this stage, it is difficult to strictly apply quality criteria, it is nevertheless possible to identify (i) examples of good practice, and (ii) priority needs of development in this field.

IV. Recommendations and Outlook.

There seems to be wide agreement on the strategic role which impact assessment could play everywhere for the successful implementation of integrated programs such as *Agenda 21* or Environmental Health action plans. In practice, there still is under-utilization, and a surprising lack of standardization of methodology. Coverage of human health issues varies widely, ranging from primary focus to complete neglect. A mundane but highly useful step forward would be to provide better access to completed impact assessment statements, and to secure a minimum of standardized documentation and analysis as a basis for discussion and methodological improvements.

Keywords. Environmental Health Impact Assessment (EHIA), typology, quality criteria