

**ONSHORE IMPACTS OF OFFSHORE OIL.** Edited by WILLIAM J. CAIRNS and PATRICK M. ROGERS. Proceedings of the International Conference on Oil in the Environment, Edinburgh, Scotland, 1980. London and New Jersey: Applied Science Publishers Ltd., 1981. 319 p. Hardbound. US\$48.00 + \$3.10 handling and postage charges. (US and Canadian orders to Applied Science Publishers Inc., 44 Eagle Street, Englewood, N.J. 07631, U.S.A.)

The subject of this book is somewhat narrower than the title implies since it deals almost entirely with experiences in the North Sea only and not on a global scale. The book contains the proceedings, in all 24 individual papers plus discussions and summary remarks, of an international conference on oil in the environment, held at the University of Edinburgh in September 1980. The conference attendees included planners, bankers, engineers, architects and ecologists from the government, petroleum industry, consulting firms and universities, with most of them coming either from the United Kingdom or Norway. The philosophical intention of the conference was to produce friendly confrontation between conservationists, socioeconomists and oil men.

The topic of the conference was, and remains, very relevant, since the effects of offshore petroleum development in the North Sea on both the United Kingdom and Norway are, of course, substantial. For example, in Aberdeen, the offshore petroleum "capital" of Europe, employment in petroleum-related jobs rose by 30 000 in the seventies, and 30 000 new houses were built. The cost of housing increased by 450% for a three-bedroom traditional-style house. In Stavanger, oil-related employment rose from 500 to 14 000 during the same period. Economic, social and cultural effects of the oil boom are enormous, affecting among other things local employment, crime rate and the entire financial basis of the communities involved. It is not surprising that most of the book deals with these issues rather than environmental-ecological ones.

Environmental impact analysis is not obligatory in either the United Kingdom or Norway. To North American readers of the book it is astonishing that in Scotland during 1970-75 all five major oil and gas terminals, all service bases, four land pipelines, some 15 platform yards and 50 other major developments were approved rapidly and without public inquiry. Individual oil companies, particularly British Petroleum (BP), did conduct their own environmental impact assessments for major projects, however, based in part on their experiences in Alaska. In Norway, such assessments emphasized the economic and social effects of oil-related development and paid relatively little attention to natural, physical and biological environments.

Several of the papers outline in general terms the need for planning and control strategies, ranging from the local government level up to the European Economic Community (EEC). Environmental impact legislation is very different in the various EEC countries and nonexistent in many. Most of the papers deal with specific case studies, however, describing problems and solutions in the Orkney and Shetland islands, Scotland and Norway, at Musmorran, the Forties field, St. Fergus, the Flotta terminal, Stavanger, Aberdeen, Sullom Voe, etc. As already mentioned, much of the impact discussed is of the socioeconomic nature, but amenities (e.g., beaches), resources (e.g., fisheries), bird life and marine ecosystems are also referred to. Esthetics play a large role as shown by the following paragraph on color selection for a tank farm:

"... first a series of perspective drawings were made recording the pattern of light falling on the tanks. From 10 a.m. to 5 p.m. the tanks were either in full light or full shade. But in early morning or early evening there was a sharp contrast between the areas which appeared white. This problem of reflection on a smooth surface, regardless of color, is almost insoluble.

Then all possible vegetation colors were photographed in both summer and autumn. On the basis of these colors 48 painted panels were made and set in the vicinity of the island. The panels were viewed against different conditions of ground, vegetation, sky and water background of the island. All but 12 colors were rejected. A series of cylinders of roughly the same shape as the tanks were made and painted with these colors. They were then tested around the island against the various backgrounds. In this way eight of the 12 colors were eliminated leaving a green, a green-brown, a blue and a blue-grey."

It is clear that both the political framework and mechanisms and environmental conditions and concerns in the Arctic dictate an approach to offshore petroleum exploitation which is very different from that in the North Sea. Are there, then, any lessons for us to learn from the North Sea experience? I believe there are. The parallels between Stavanger and Aberdeen on the one hand, and Fairbanks and Anchorage on the other, are all too painfully obvious, particularly when comparing the prices of houses, for example,

which rose steeply as a result of the explosive oil development at Prudhoe Bay. Although different governmental mechanisms are in place and the physical and biological environments differ greatly, the basic environmental concerns are the same.

*Onshore Impacts of Offshore Oil* therefore makes interesting reading for those concerned with the same problems in the Arctic. I have few complaints about the material presented in the book except to note the lack of an introductory overview of industrial activities, including a map showing the various oil terminals, pipelines and support facilities on both sides of the North Sea. This could easily have been added by the editors. In all, I liked the book, however, and recommend it to all those concerned with offshore petroleum development anywhere in the world.

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**INDUSTRIALIZATION AND ASSESSMENT — SOCIAL IMPACT ASSESSMENT AS A SOCIAL PHENOMENON.** By DOUGLAS TORGERSON. York University Publications in Northern Studies. Toronto: York University, 1980. x+200 p. Softbound. Institutions \$7.50; Individuals \$5.00.

Social impact assessment is a major growing edge of applied social science. Probably hundreds of social impact assessments (SIAs) are conducted in North America each year as a consequence of a need, now widely perceived (and often required by law), to assess the socioeconomic implications of projects as diverse as northern pipelines, airport extensions and waste-disposal sites. Numerous volumes have been written in the last decade on the theory and method of social impact assessment, and there are now journals and newsletters devoted to the subject. Yet there is almost no literature exploring the premises and functions of SIA in the context of the development of modern industrial society. Torgerson's monograph is a major contribution in this respect. Not only does it fill a gap, it does so extremely well. It is a study in the sociology of the social and policy sciences, relying heavily for illustration on the use of social impact assessment in the Canadian North, with particular reference to the Berger Inquiry.

*Industrialization and Assessment* is not a casual read. Those interested in producing formula impact statements, based on a prescribed checklist, to meet only the minimum legal or political requirements, will not find it very helpful to that end. I can recommend this work very highly, however, to practitioners or citizens who are interested in the deeper issues that social impact assessment raises in contemporary society. The essence of Torgerson's argument may be found in the first chapter. The subsequent sections consist of a more detailed exploration of the ideology of industrialization, and the development of the policy sciences with particular reference to social impact assessment in that context. The book is documented with extensive references and footnotes.

SIA is a process now largely institutionalized by governments. Impact statements are now routinely prepared, and there is a fast-evolving system of guidelines for their preparation, for their assessment, and for public involvement in those processes. They are almost invariably project-specific, and they rely heavily on technical and scientific expertise and method. Yet the public debate about the projects under assessment frequently focuses on issues not amenable to "scientific" measurement, analysis, or even discourse, as we commonly understand those procedures.

There is now a standard catalogue of impact categories: income, employment, business investment, multiplier effects, public infrastructure and finance, demographics, and a few social indicators like health and education. When these are exhausted, we are left with vague notions of social well-being, quality of life, and "lifestyle" preferences, which conventional assessments dismiss in a few paragraphs as important but unmeasurable and hence incapable of objective evaluation. Yet these are the matters that citizens themselves are most likely to raise in response to development initiatives, although often in quite unsystematic fashion. Project proponents are in turn likely to dismiss this opposition as reactionary, uninformed, unrealistic or irresponsible. The pattern repeats itself from assessment to assessment, and from inquiry to inquiry, yet we never seem to come to grips with it. Both proponents and intervenors often go away frustrated.

Torgerson identifies two divergent trends in SIA that manifest this problem. One is a technocratic, positivist approach that relies heavily on expertise, and claims to be value-free. It attempts to achieve technical control over social life by anticipating and then modifying the impact of specified acts. The second