RESOURCES MARKETS AND MANAGEMENT

Reading/Reference List & Course Outline

With world commodity prices at record lows, we are once again reminded of the importance of the resources sector to the Australian economy. This subject attempts to use recent economic theory to shed light on some of the private and social issues related to resource development. Meanwhile, there is widespread concern at global environmental despoliation: the greenhouse effect of global heating, the disappearance of the protective ozone layer, the pollution of the Mediterranean and North Seas, acid rain, and—closer to home—the seemingly inexorable salinification of Australia's irrigation regions.

Broad issues include an examination of the economic aspects of resource extraction, sale, and use, including the use of renewable and non-renewable natural resources, and environmental degradation. Assessment of the importance of the problem, the microeconomics of externalities and public goods, the market as efficient intertemporal allocator, policies for industry and community.

In particular, the subject includes an examination of the stock and flow conditions necessary for the efficient allocation of natural resources (including environmental amenities) through time. We shall examine actual resource markets to examine possible relative scarcity and explanations for price fluctuations. We shall discuss policies for resource management, of both exhaustible and renewable resources, and both in situ and extractive resources. We shall examine the costs of pollution and methods of pollution control.

Outline of subject:

I Resource markets.

1.1 Introduction & definitions.
1.2 The Australian scene.
1.3 Natural resource scarcity.
1.4 The pricing of exhaustible resources.
1.5 The world oil market.
1.6 Taxing resources: auctions & royalties.
1.7 Trade in resources.

II Economics of the environment.

2.1 Renewable resources.
2.2 Natural resources & natural environment.
2.3 Environmental pollution.
2.4 Property rights.

Required text:


As well, the following books will be found useful:


Baumol W. J. & W. E. Oates, Economics, Environmental Policy, & the Quality of Life, Englewood Cliffs: Prentice-Hall, 1979 (AGSM 301.31/29) (on reserve)

Howe C. W., Natural Resource Economics, NY: Wiley, 1979 (AGSM 333/7,10,11) (one copy on reserve)


Additional readings will be found below. Recommended readings are marked with an asterisk (*). A Package of course notes is available. Readings in the Package are marked with a P.

I Resource Markets.

1.1 Introduction & Definitions.

*Fisher, Ch. 1
*Baumol & Oates, Ch. 6
*Howe, Ch. 1,2
*Simon J. L., The Ultimate Resource, Princeton: PUP, 1981, Ch. 1,2,3,7,8 (AGSM 333.7/73) P

Cloud P., Mineral resources in fact & fantasy, in H. E. Daly (ed), Toward a Steady-State Economy, SF: Freeman, 1973 (AGSM 338.09/1)

1.2 The Australian Scene.

*Porter’s, Helliwell’s graphs P


Lloyd P.J., Domestic processing, value added and globalisation, Ch. 14, in C.

IC, Mining and minerals processing in Australia: overview, 1991.


*Doran C. R., An historical perspective on mining & economic change, in Cook & Porter, Ch. 2*


Agriculture & Resources Quarterly, AGSM Serials.

McKern B. & P. Koomsup, (ed.) *Minerals Processing in the Industrialisation of ASEAN and Australia*, Sydney: Allen & Unwin, 1988, Ch. 5, Australia, by B. McKern & A. Waltho; Ch. 11, Case studies in the economic evaluation of minerals processing activities, by C. Emerson. (AGSM 338.20994/19)

Fitzgerald T. M., *The contribution of the mineral industry to Australian welfare*, in Lloyd, Ch. 2, & Canberra: AGPS, 1974 (AGSM 339.520994/1,3)


1.3 Natural Resource Scarcity.

*Fisher, Ch. 4

*Howe, Ch. 4, 7, 10

*Marks R. E., Economic scarcity P

Pearce & Turner, Ch. 19

Forester T., The materials revolution. (On reserve)

Tietenberg T., *Environmental and Natural Resource Economics*, Glenview: Scott-Foresman, 1984, Ch. 11 (AGSM 333.7/86) P

*Radetzki M., Structural change in world metal markets. P

*Miller M.H. & Upton C.W., The pricing of oil and gas: some further results. P


1.4 **The Pricing of Exhaustible Resources.**

*Fisher, Ch. 2*

*Baumol & Oates, Ch. 7,8 and Minerals prices. P*

*Howe, Ch. 5,6*

*Marks R. E., Exhaustible resources & scarcity rent. P*

*Vogely W. A., Issues in mineral supply modeling. P*

*Edwards J., Scandals, computers, and cartels. P*

Tietenberg, Ch. 7,8

Pearce & Turner, Ch. 18


*The Tin Case Study. P*

1.5 **The World Oil Market**

*Epstein E. J., The cartel that never was. P*


1.6 **Taxing Resources: Auctions & Royalties.**
*Emerson C. & P. J. Lloyd, Improving mineral taxation policy in Australia, Economic Record, vol 59, Sept 1983. & Figure in P
Bergstrom T. C., Property rights & taxation in the Australian minerals sector, Ch. 7, & Nellor D. C. L., Taxation of the Australian resources sector, Ch. 8, in Cook & Porter

1.7 **Trade in Resources**
*Smith B., Long-term contract arrangements and financing arrangements for minerals development, ANU Australia-Japan Centre, 1980. P

II **Economics of the Environment.**

2.1 **Renewable Resources.**
*Fisher, Ch. 3
Howe, Ch. 11,12,13
Tietenberg, Ch. 9,10
Pearce & Turner, Ch. 16,17
Neher, Ch. 1

2.2 **Natural Resources & Natural Environment.**
*Fisher, Ch. 5
*Marks R. E., Competition & common property. P
Heal G., The use of common property resources, Ch. 3 in Smith V. K. & J. V.
Krutilla (eds), *Explorations in Natural Resource Economics*, Baltimore: Johns Hopkins UP, 1982 (AGSM 333.7/81)

Smith B., Resource developments & environmental policy issues, in Harris & Taylor.


2.3 **Environmental Pollution.**

*Fisher, Ch. 6*
*Marks R.E., Finding the middle ground: the use of market incentives to protect the environment. P Markets, the State and the Environment: Towards Integration, ed. by R. Eckersley, Melbourne: Macmillan, 1995. AGSM 333.7/112

Pearce & Turner, Ch. 4,5,6,7

Stroup R.L. and J.S. Shaw, Free enterprise and the environment: is private ownership the most effective incentive for unpolluted streams and replanted forests? (On reserve)

*The Economist, The Environment, a survey, September 8, 1990. (On reserve)*

*The Economist, Energy and the Environment, a survey, August 31, 1991. (On reserve)*


Tietenberg, Ch. 12-17

Seneca & Taussig, Ch. 3, 9, 10

Baumol & Oates, Ch. 14-21


Ruff L. E., The economic common sense of pollution, in Dorfman & Dorfman, Ch. 1


2.4 **Property Rights.**


Baumol & Oates, Ch. 15
Pearce & Turner, Ch. 8


Mason Ch, User Charges for Domestic Garbage Services, Mascot: Southern Sydney Regional Organisation of Councils, 1994. agsm 363.728/1


