

รายการอ้างอิง

ภาษาไทย

วิทยาศาสตร์ เทคโนโลยีและสิ่งแวดส้อม, กระทรวง. <u>ทาเนียบองค์การเอกชนด้านสิ่งแวดส้อม</u>. กรุงเทพมหานคร: กรมส่งเสริมคุณภาพสิ่งแวดส้อม, 2537.

ธารทอง ทองสวัสดิ์. ประชาธิบาตยขาดดุลานสหภาพยุรรบ: ที่มาและสู่ทางในการแก้ไข.

Journal of European Studies 2 (January-June 1994): 1-20.

นิตยสารโลกสีเขียว 1 (มีนาคม-เมษายน 2535): 51.

สหประชาชาติแห่งประเทศไทย, สมาคม. <u>เรื่องน่ารู้เกี่ยวกับสหประชาชาติ</u>. กรุงเทพมหานคร:
บริษัทโรงพิมพ์เทคนิค 19, 2533.

สยามจดหมายเหตุ 17 (10-11 กรกฎาคม 2535): 783.

อรณี นวลสุวรรณ์. <u>พัฒนาการของประชาคมยุรรป ตั้งแต่ ค.ศ. 1980</u>. กรุงเทพมหานคร: สำนักพิมพ์จุฬาลงกรณ์มหาวิทยาลัย, 2531.

ภาษาอังกฤษ

- Baldock, D. The Integration of Environmental Protection Requirements

 into the Definitions and Implementation of other EC Policies.

 London: Institute for European Environmental Policy, 1992.
- Briggs, D.J. The State of the Environment in the European Community

 1986. Luxembourg: Office for Officeal Publications of the
 European Communities, 1987.

- Bulletin der Europaeischen Gemeinschaften 4 (1981): 27.
- Bulletin der Europaeischen Gemeinschaften 2 (1982): 32.
- Bulletin der Europaeischen Gemeinschaften 6 (1982): 48.
- Caldwell, L.K. <u>International Environmental Policy: Emergence and Dimensions</u>. North Carolina: Duke University Press, 1984.
- Charit Tingsabadh. What ASEAN Might Learn from EU Environmental

 Management. The Future of ASEAN EU Relations: Challenges

 from the Asia-Pacific Region, p.1. Bangkok, Thailand,

 February 9-10, 1995.
- Commission of the European Communities. Directorate-General XI

 Environment, Nuclear Safety and Civil Protection. European

 Community Environment Legislation: Volume 1 General Policy.

 Luxembourg: Official for Official Publications of the

 European Communities, 1992.
- European Community Environment Legislation: Volume 2 Air.

 Luxembourg: Office for Official Publications of the European

 Communities, 1992.
- European Community Environment Legislation: Volume 3 Chemicals,

 Industrial Risks and Biotechnology. Luxembourg: Office for

 Official Publications of the European Communities, 1992.
- Davis, C. International Affairs and the Environment. <u>Studia Diplomatica</u>
 1 (1987): 102.
- Erdmann-Keefer, V. Fellow-in-residence, European Studies Programme, Chulalongkorn University. การสนทนา, 8 March 1995.

- Europaeische Gemeinschaften. Bericht im Namen des Ausschusses fuer

 Umweltfragen, Volksgesundheit und Verbraucherschutz ueber den

 Vorschlag der Kommission der Europaeischen Gemeinschaften an den

 Rat (Dok. 1-293/80) fuer eine Richtlinie ueber die

 Umweltvertraeglichkeitspruefung bei bestimmten oeffentlichen und

 privaten Vorhaben. Europaeisches Parlament Sitzungsdokumente

 1-569/81/rev (2 Februar 1982): 3-37.
- European Communities. <u>Directory of Community Legislation in Force and other Acts of the Community Institutions</u>. European Communities: Brussels-Luxembourg, 1994.
- European Community Environment Protection. Luxembourg: Office for Official Publications of the European Communities, 1987.
- Fontaine, P. Europe in Ten Lessons. Brusscls: Eureka Slide, 1992.
- Hammer, D. EEC guidelines for environmental impact assessment. In

 T. O'Riordan, and R.D. Hey. (eds.), Environmental Impact

 Assessment, pp. 35-44. Farnborough, Hampshire: Saxon house,

 1976.
- Horn, C., von Walterskirchen, M.P., and Wolff, J. <u>Umweltpolitik in Europa</u>. Switzerland: Verlag Huber & Co. AG,
- House of Lords Select Committee on the European Communities. 11 th

 Report: Environmental Assessment of Projects. London: HMSO.,

 1989.
- Hurrell, A., and Kingsbury, B. The International Politics of the

- Environment. Oxford: Clarenden Press, 1992.
- Hurwitz, L., and Lequesne, C. <u>The State of the European Community:</u>

 Policies Institutions and Debates in the Transition Years.

 Colorado: Lyne Reinner publishers, 1991.
- Cooperation. New York: Greenwood Press, 1987.
- Johnson, S.P., and Corcelle, G. The Environmental Policy of the

 <u>European Communities</u>. London: Graham & Trotman, 1989.
- Judge, D. A Green Dimension for the European Community: Political

 .
 .
 . Issues and Process. Great Britain: Frank Cass & Co. Ltd., 1993.
- Kennedy, W.V. The Directive on Environmental Impact Assessment.

 <u>Environmental Policy and Law 8 (1982): 85.</u>
- Keohane, R.O., and Hoffmann S. The New European Community

 Decisionmaking and Institutional Change. USA: Westview Press,

 1991.
- Kiss, A., and Shelton, D. <u>Manual of European Environmental Law</u>.

 Cambridge: Cambridge University Press, 1993.
- Lasok, D. The Law of the Economy on the European Communities. London:

 Butterworth & Co., Publishers Ltd., 1980.
- Lee, N., and Wood, C. Training for Environmental Impact Assessment within the European Economic Community. <u>Journal of Environmental Management</u> 21 (1985): 272.
- Environmental impact assessment: a review. Applied Geography

 3 (1983): 5-27.

- Mathijsen, P.S.R.F. <u>A Guide to European Community Law</u>. London: Sweet & Maxwell, 1990.
- Mitteilung an die Presse. 7803/85 (Presse 108). (27/28 Juni 1985): 2.
- Nicoll, W., and Salmon, T.C. <u>Understanding the European Communities</u>.

 New York: Philip Allan, 1994.
- Noel, E. Working Together the Institutions of the European Community.

 Luxembourg: Office for Official Publications of the European

 Communities, 1992.
- Nugent, N. The Government and Politics of the European Union.

 England: The Macmillan Press Ltd., 1994.
- Official Journal of the European Communities C139 (13.06.1977): 36.
- Official Journal of the European Communities C169 (09.07.1980): 14.
- Official Journal of the European Communities C185 (27.07.1980): 8.
- Official Journal of the European Communities C110 (01.05.1982): 5,
- Official Journal of the European Communities L67 (14.03.1991): 67.
- Paschen, H. The Role of Environmental Impact Assessment in the

 Decision Making Process: Proceedings of an International

 Workshop Held in Heidelberg, Federal Republic of Germany,

 August 1987. Berlin: Erich Schmidt Verlag, 1989.
- Perkins, E.J. New Dimensions in Foreign Affairs: Public

 Administration Theory in Practice. <u>Public Administration</u>

 <u>Review</u> 50 (July 1990): 491.
- Plano, J.C., and Olton, R. <u>The International Relations Dictionary</u>.

 California: ABC-Clio Inc., 1982.

- Poehle, K. <u>Ein Parlament in voller Entfaltung: Europaeisches</u>

 <u>Parlament 1952-1988</u>. Luxembourg: Amt fuer antliche Veroeffentlichungen der Europaeishen Gemeinschaften, 1988.
- Rehbinder, E. <u>Environmental Protection Policy Integration Law</u>

 <u>Series Europe and the American Federal Experience</u>. Berlin:

 Walter de Gruyter, 1985.
- Rindermann, H. <u>Die Entwicklung der EG-Umweltpolitik von den</u>

 <u>Anfaengen bis 1991</u>. Deutschland: Lit Verlag, 1992.
- Royce, B. The Democratic Deficit of the European Community.

 Parliamentary Affairs 46 (October 1993): 472.
- Salter, J.R. Environmental Assessment: The Challenge from Brussels.

 Journal of Planning and Environment Law (January 1992): 14-20.
- Schick, A., Erbguth, W. <u>Gesetz ueber die Umweltvertraeglichkeitspruefung</u>.

 Muenchen: C.H. Beck'sche Verlagsbuchhandlung, 1992.
- Treaties establishing the European Communities. Luxembourg: Office for Official Publications of the European Communities, 1987.
- United Nation. Application of Environmental Impact Assessment

 Principles to Policies, Plans and Programmes. New York:

 United Nations, 1992.
- Urwin, D.W. <u>The Community of Europe: A History of European</u>

 <u>Integration since 1945</u>. England: Longman group publishers

 Ltd., 1991.
- Vaughan, D. Q.C. <u>Current EC Legal Development Series: Environment</u>

 and <u>Planning Law</u>. London: Butterworth & Co. Ltd., 1991.

- Wandesforde-Smith, G. Environmental Impact Assessment in the

 European Community. Zeitschrift fuer Umweltpolitik 1 (1979): 37.
- Wathern, P. Environmental Impact Assessment: Theory and Practice.

 London: Unwin Hyman, 1988.
- Weidenfeld, W., and Wessels, W. <u>Europa von A-Z: Taschenbuch der</u>

 <u>Europaeischen Integration</u>. Bonn: Europa Union Verlag, 1991.
- The Courier: African-Caribbean-Pacific European Community 133
 (May June 1992): 4.
- Whitaker's Almanack 1994. London: J. Whitaker & Sons Ltd., 1994.

Wheeler, J.C. The Practical Implications of the Earth Summit.

William, A.M. The European Community: the Contradictions of Integration.

Oxford: T.J. Press Ltd., 1991.

ศูนย์วิทยทรัพยากร จุฬาลงกรณ์มหาวิทยาลัย



ศูนย์วิทยทรัพยากร จุฬาลงกรณ์มหาวิทยาลัย

ภาคผนวก ก

(ตัดตอนบางล่วน)

TREATY ESTABLISHING THE EUROPEAN ECONOMIC COMMUNITY APPROXIMATION OF LAWS

Article 100

The Council shall, acting unanimously on a proposal from the Commission, issue directives for the approximation of such provisions laid down by law, regulation or administrative action in Member States as directly affect the establishment or functioning of the common market.

The European Parliament and the Economic and Social Committee shall be consulted in the case of directives whose implementation would, in one or more Member States, involve the amendment of legislation. 1

¹Treaties establishing the European Communities (Luxembourg: Office for Official Publications of the European Communities, 1987), pp. 202-203.

Article 101

Where the Commission finds that a difference between the provisions laid down by law, regulation or administrative action in Member States is distoring the conditions of competition in the common market and that the resultant distortion needs to be eliminated, it shall consult the Member States concerned.

If such consultation does not result in an agreement eliminating the distortion in question, the Council shall, on a proposal from the Commission, acting unanimously during the first stage and by a qualified majority thereafter, issue the necessary directives. The Commission and the Council may take any other appropriate measures provided for in this Treaty.²

GENERAL AND FINAL PROVISIONS

Article 235

If action by the Community should prove necessary to attain, in the course of the operation of the common market, one of the objectives of the Community and this Treaty has not provided the necessary powers, the Council shall, acting unanimously on a proposal from the Commission and after consulting the European Parliament, take the appropriate measures.³

²Ibid., p. 205.

³Ibid., p. 314.

TITLE VII4

ENVIRONMENT

(ตัดตอนบางส่วน)

Article 130r*

- 1. Action by the Community relating to the environment shall have the following objectives:
- (i) to preserve, protect and improve the quality of the environment;
 - (ii) to contribute towards protecting human health;
- (iii) to ensure a prudent and rational utilization of natural resources.
- 2. Action by the community relating to the environment shall be based on the principles that preventive action should be taken, that environmental damage should as a priority be rectified at source, and that the polluter should pay. Environmental protection requirements shall be a component of the Community's other policies.

⁴Ibid., pp. 247-248. Title VII consisting of Articles 130r, 130s and 130t as added to Part Three of the Treaty of Article 25 of the SEA.

- 3. In preparing its action relating to the environment, the Community shall take account of :
 - (i) available scientific and technical data;
- (ii) environmental conditions in the various regions of the Community;
- (iii) the potential benefits and costs of action or of lack of action;
- (iv) the economic and social development of the Community as a whole and the balanced development of its regions.
- 4. The Community shall take action relating to the environment to the extent to which the objectives referred to in paragraph I can be attained better at Community level than at the level of the individual Member States. Without prejudice to certain measures of a Community nature, the Member States shall finance and implement the other measures.
- 5. Within their respective spheres of competence, the Community and the Member States shall cooperate with third countries and with the relevant international organizations, The arrangements for Community cooperation may be the subject of agreements between the Community and the third parties concerned, which shall be negotiated and concluded in accordance with Article 228.

The previous paragraph shall be without prejudice to Member States' competence to negotiate in international bodies and to conclude international agreements.

Article 130s*

The Council, acting unanimously on a proposal from the Commission and after consulting the European Parliament and the Economic and Social Committee, shall decide what action is to be taken by the Community.

The Council shall, under the conditions laid down in the preceding subparagraph, define those matters on which decisions are to be taken by a qualified majority.

Article 130t*

The protective measures adopted in common pursuant to Article 130s shall not prevent any Member State from maintaining or introducing more stringent protective measures compatible with this Treaty.

ภาคผนวก ข

Proposal for a Council Directive concerning the assessment

of the environmental effects of certain public and

private projects (Submitted by the Commission

to the Council on 16 June 1980) 1

THE COUNCIL OF THE EUROPEAN COMMUNITIES,

Having regard to the Treaty establishing the European Economic Community and in particular to Article 100 thereof,

Having regard to the proposal from the Commission,
Having regard to the opinion of the European Parliament,

Having regard to the opinion of the Economic and Social Committee,

Whereas the 1973 and 1977 Action Programmes of the European Communities on the Environment² provide that 'the best environmental policy is preventing the creation of pollution or nuisances at source rather than subsequently trying to counteract their effects'; whereas they affirm that' effects on the environment should be taken into

¹OJ No C 169, 9.7.1980, p. 14-22.

²OJ No C 122, 20.12. 1973 and C 139, 13.6.1977.

account at the earliest possible stage in all the technical planning and decision-making processes' and that 'it is therefore necessary to evaluate the effects on the quality of life and on the natural environment of any measure that is adopted or contemplated at national or Community level';

Whereas the 1977 Action Programme acknowledges³ that 'the application at the appropriate administrative levels of procedures for assessing environmental impact meets the need to implement the objectives and principles laid down in the 1973 Action Programme'; and whereas it envisages the submission by the Commission to the Council of proposals on environmental impact assessment;

Whereas it is desirable that there should be a harmonious development of economic activities while ensuring that full account is taken of the effects on the environment;

Whereas to this end, and in accordance with the Action Programme, general principles for the assessment of environmental effects should be introduced, with a view to improving good management of planning procedure governing private and public activities likely to have significant effects on the environment; in particular, planning and decision-making with respect to individual projects, land use plans, regional development programmes, economic programmes including those in particular sectors;

 $^{^{3}}$ OJ No C 139, 13. 6. 1977, Title IV, Chapter 1.

Whereas, however, it is appropriate to introduce principles of assessment step by step in order to avoid an excessive burden on administrations;

Whereas priority has to be given, as a first step, to the introduction of assessment principles in planning and decision-making procedures for allowing projects, in view of the urgency of preventing the most significant negative effects, and because the availability in all Member States of procedures for the control of projects permits the introduction of assessment principles without requiring the creation of new procedures;

Whereas to this effect planning permission for projects which are likely to have significant effects on the environment should be granted only after an appropriate prior assessment of the likely significant environmental effects of these projects has been carried out; and whereas, therefore, competent authorities and developers should cooperate in order to provide the appropriate information on the possible range of environmental effects of the envisaged project, as well as on the reasonable alternatives to it;

Whereas, moreover, over the last few years Member States have adopted a considerable body of laws and regulations in the general field of environmental protection and a number of them specifically in the field of the assessment of environmental effects;

Whereas a significant disparity between measures in force in the various Member States with regard to the assessment of environmental effects may create unfavourable competitive conditions and thereby directly affect the functioning of the common market and whereas, therefore, it is necessary to undertake the approximation of national laws in this field pursuant to Article 100 of the Treaty;

Whereas, therefore, the general principles of assessment should be harmonized, as regards in particular the main obligations of the developers, the projects which should be submitted to the assessment, the content of the assessment and the environmental features which ought to be taken into consideration in an assessment;

Whereas such assessment is a comprehensive process and requires that the whole range of relevant sectorial environmental effects be taken into account; and whereas, to this end, it is necessary that all statutory bodies which carry a sectorial or an overall responsibility for environmental matters are properly consulted during the assessment process;

Whereas the public at large has a basic interest in the correct assessment of the likely environmental effects; whereas it can supply essential information to the competent authorities, and whereas it can therefore, the competent authorities should see that the public is given the opportunity to make its views known so that due account is taken of them in the assessment process;

Whereas it appears necessary, where important transfrontier effects of a project might arise, to extend consultations to competent authorities of other Member States, thus assuring equality of treatment of projects located in frontier regions with those in other regions,

HAS ADOPTED THIS DIRECTIVE

Article 1

- (1) This Directive shall apply to the assessment of the environmental effects of those public and private projects which are likely to have significant effects on the environment.
 - (2) For the purposes of this Directive: development project means a proposal:
 - (a) to construct buildings, installations or facilities;
 - (b) to extract minerals;
 - (c) to make substantial changes in the landscape: modification project means a proposal:
- (a) to construct an extension or modification of buildings, installations or facilitis;
- (b) to make a substantial change in the use of buildings, installations or facilities;
 - (c) to extend or modify mineral workings;

project means either a development project or a modification
project;

competent authority means the authority or the authorities responsible in each Member State for executing the tasks set out in the present Directive in respect of a given project;

developer means the applicant for planning permission for a private project or the public authority which proposes a project;

planning permission means the decision of the competent authority to permit a project in the private sector or the corresponding decision to proceed in the case of a project in the public sector;

Article 2

Member States shall adopt all necessary measures to ensure that, before any planning permission is given, projects likely to have a significant effect on the environment by virtue of their nature, size and/or location are made subject to an appropriate assessment of these effects, in accordance with the following Articles.

Article 3

- (1) The assessment provide for in Article 2 shall consider the effects of projects on
- _ water, air, soil, climate, flora, fauna and their interrelationships;

- _ the built-up environment, including the architectural heritage, and the landscape.
- (2) The effects on these resources shall be assessed by reference to the need to protect and improve human health and living conditions as well as to preserve the long term productive capacities of the resources.

Article 4

(1) Development projects of the classes listed in Annex I shall be made subject to an assessment in accordance with Articles 6 to 11.

For the purpose of excluding exceptional cases which are unlikely to have any significant effect on the environment, the competent authority may, with the agreement of the Commission, exempt a particular project below a specified threshold from the assessment mentioned above and, where appropriate, make it subject to a simplified form of assessment.

(2) Projects of the classes listed in Annex 2 and modification projects of the classes listed in Annex 1 shall be made subject to an assessment in accordance with Articles 6 to 11, whenever their characteristics so require.

The competent authority shall establish the criteria and thresholds necessary to determine which of those projects are to be made subject to an assessment in accordance with Article 6 to 11 or,

where appropriate, to a simplified form of assessment.

(3) The competent authority shall examine which projects other than those mentioned above are likely to have a significant effect on the environment, having regard in particular to the environmental sensitivity of the site of the projects with a view to determining which projects should be made subject to an assessment in accordance with Articles 6 to 11 or, where appropriate, to a simplified form of assessment.

Article 5

Member states shall inform the Commission of the criteria and thresholds adopted for the selection of projects referred to in Article 4 (2) and (3). The Commission shall regularly review with Member States these criteria and thresholds, with a view to ensuring consistency in the application of the Directive.

Article 6

- (1) The Member States shall adopt the necessary measures to ensure that the developer prepares, with the assistance of the competent authority when necessary, and supplies with his application for planning permission the following information in an appropriate form:
- a description of the proposed project and, where applicable, of the reasonable alternatives for the site and design of

the project;

- _ a description of the environment likely to be significantly affected by the proposed project, including where applicable, the environment in other Member States;
- an assessment of the likely significant effects on the environment, including; where applicable, effects on the environment, including, where applicable, effects on the environment in other Member States;
- _ a description of the measures envisaged to eliminate, reduce or compensate adverse effects on the environment;
- _ a description of the relationship between the proposed project and existing environmental and land-use plans and standards for the area likely to be affected;
- _ in the case of significant effects on the environment, an explanation of the reasons for the choice of the site and design of the proposed solutions which might have less adverse effects, if any, on the environment;
 - _ a non-technical summary of the items above.
- (2) The information to be supplied in accordance with paragraph I shall also contain the data referred to in Annex 3 to the extent that they are relevant to the stage of the planning procedure and to the specific characteristics of the project and of the environment likely to be affected, and to the extent that the developer can reasonably be expected to be able to obtain them, taking

into account existing knowledge and assessment methods.

(3) At the appropriate stages of the planning procedure, the competent authority shall require completion of, or assist in completing when appropriate, the information to be supplied by the developer.

Article 7

(1) The competent authority shall send for opinion the application for a planning permission as well as the information gathered pursuant to Article 6 to all relevant administrative authorities and other statutory authorities or bodies with specific responsibility for environmental matters.

The competent authority shall determine the authorities and bodies to be consulted and shall fix, where necessary, a suitable time limit within which comments shall be delivered.

(2) If the project is likely to produce a significant effect on the environment in another Member State, the competent authority shall also ensure that the information gathered pursuant to Article 6 is sent for comment to the competent authority in that Member State and fix a suitable time limit within which comments should be returned.

Article 8

The competent authority shall publish the fact that the application for planning permission has been made, shall make publicly

available the application for planning permission, as well as the information gathered pursuant to Article 6, and shall arrange appropriate consultation with the public concerned. In the light of the importance of the likely environmental effects and of the number of persons likely to be affected, the competent authority shall decide the best means for giving the information to the public within a suitable time limit and for ascertaining the views of the public.

Article 9

The provisions of Articles 7 and 8 do not affect the obligation of the competent authority to respect the limitations imposed by national laws, regulations, administrative provisions and accepted practices with respect to industrial and commercial secrecy, as well as to the public interest;

Article 10

- (1) The competent authority in its decision on an application for planning permission shall take into consideration the information gathered pursuant to Articles 6, 7 and 8, and shall, to that end, make an assessment of the likely significant effects of the proposed project.
- (2) The competent authority, except when the planning permission is refused on grounds other than environmental, shall make publicly available, either in a separate document or as part of the decision on application for planning permission, the following:

- _ its assessment of the likely significant effects on the environment of the proposed project;
- _ a synthesis of the main comments and opinions received pursuant to Articles 7 and 8;
- _ the reasons for granting or refusing the planning permission;
- _ the conditions, if any, to be attached to the planning permission.

Article 11

The competent authority shall check periodically whether the conditions attached under Article 10 to a planning permission are being complied with, whether they are still adequate, whether other previsions to protect the environment are being obeyed and whether it needs to take further measures to protect the environment from the effects of the project.

Article 12

- (1) The Member States and the Commission shall exchange information on experience in the field of assessment of environmental effects, in particular on the functioning of the procedures laid down in this Directive and on the improvement of assessment methods.
 - (2) Five years after the adoption of the present Directive,

the Commission shall send to the Council, and to the European Parliament a report on the operation and effectiveness of the Directive, based on this exchange of information.

Article 13

- (1) The Member States shall take the measures necessary to comply with this Directive within two years of its notification.
- (2) The Member States shall communicate to the Commission the texts of the relevant national law which they adopt in the field governed by this Directive.

Article 14

This Directive is addressed to the Member States.

ANNEX 1

DEVELOPMENT PROJECTS4 REFERRED TO IN ARTICLE 4.1

⁴Development projects are classified, as far as possible, in the classes, groups and sub-groups of the 'General Industrial Classification of Economic Activities' within the European Community adopted by the Statistical Office of the European Communities, 1970.

Reference numbers of the classification are indicated, where applicable.

1. Extractive industry

Extraction and briquetting of solid fuels (ii)

Extraction of bituminous shale (133)

Extraction of ores containing fissionable and fertile material (151)

Extraction and preparation of metalliferous ores (21)

2. Energy industry

Coke ovens (12)

Petroleum refining (140.1)

Production and processing of fissionable and fertile materials(152)

Generation of electricity from nuclear energy (161.3)

Coal gasification plants

Disposal facilities for radioactive waste

3. Production and preliminary processing of metals (220)

Iron and steel industry, excluding integrated coke ovens (221)

Cold rolling of steel (223)

Production and primary processing of non-ferrous metals and ferro-alloys (224)

4. Manufacture of non-metallic mineral products (24)

Manufacture of cement (242.1)

Manufacture of asbestos-cement products (243.1)

Manufacture of blue asbestos

5. Chemical industry (25)

Petrochemical complexes for the production of olefins,

olefine derivatives, bulk monomers and polymers

Chemical complexes for the production of organic

basic intermediates

Complexes for the production of basic inorganic chemicals

6. Metal manufacture (3)

Foundries (311)

Forging (312.11)

Treatment and coating of metals (313.5)

Manufacture of aeroplane and helicopter engines (364.1)

7. Food industry (41/42)

Slaughter-houses (412.1)

Manufacture and refining of sugar (420.1,420.2)

Manufacture of starch and starch products (418)

8. Processing of rubber (48)

Factories for the primary production of rubber

Manufacture of rubber tyres (481.1)

9. Building and civil engineering (50)

Construction of motorways

Intercity railways, including high speed tracks

Airports

Commercial harbours

Construction of waterways for inland navigation

Permanent motor and motorcyle racing tracks

Installation of surface pipelines for long distance transport

ANNEX 2

Projects5 referred to in Article 4.2

1. Agriculture

Projects of land reform

Projects for cultivating natural areas and abondoned land
Water management projects for agriculture (drainage, irrigation)
Intensive livestock rearing units

Major changes in management plans for important forest areas

2. Extractive industry

Extraction of petroleum (131)

Extraction and purifying of natural gas (132)

Other deep drillings

Extraction of minerals other than metalliferous and energy-producing minerals (23)

3. Energy industry

Research plants for the production and processing of fissionable and fertile material

⁵The project are classified, as far as possible, in the classes, groups and sub-groups of the 'General Industrial Classification of Economic Activities' within the European Community adopted by the Statistical Office of the European Communities, 1970.

Reference numbers of the classification are indicated, where applicable.

Production and distribution of electricity, gas, steam, and hot water (except the production of electricity from nuclear energy) (16)

Storage of natural gas

4. Production and preliminary processing of metals

Manufacture of steel tubes (222)

Drawing and cold folding of steel (223)

5. Manufacture of glass fibres (247.5) glass wool and silicate wool

6. Chemical industry

Production and treatment of intermediate products and fine chemicals

Production of pesticides and pharmaceutical products, paint and varnishes, elastomers and peroxides

storage facilities for petroleum, petrochemical and chemical products

7. Metal manufacture (3)

Stamping, pressing (312.2)

Secondary transformation treatment and coating of metals (31.3)

Boilermaking manufacture of reservoirs, tanks and other sheet-metal containers (315)

Manufacture and assembly of motor vehicles (including road tractors) and manufacture of motor vehicle engines (351)

Manufacture of other means of transport (36)

8. Food industry (41/42)

Manufacture of vegetable and animal oils and fats (411)

Processing and conserving of meat (412.2)

Manufacture of dairy products

Brewing and malting (427)

Fish-meal and fish-oil factories

9. Textile, leather, wood, paper industry

Wool washing and degreasing factories

Tanning and dressing factories (441.1)

Manufacture of veneer and plywood (462.1)

Manufacture of fibre board and of particle board (462.2)

Manufacture of pulp, paper and board (471)

Cellulose mills

10. Building and civil engineering (50)

Major projects for industrial estates

Major urban projects

Major tourist installations

Construction of roads, harbours, airfields

River draining and flood relief works

Hydroelectric and irrigation dams

Impounding reservoirs

Installations for the disposal of industrial and domestic

waste

Storage of scrap iron

11. Modifications to development project included in Annex 1

Annex 3

Content of the information required under Article 6

- 1. The description of the proposed project and, where applicable, of the reasonable alternatives for the site and design of the project, including in particular:
- -- the description of the physical characteristics of the main and the associated proposed projects and the land-use requirements during the construction and operational phases
- -- The description of the main characteristics of the production processes and the processing materials expected to be used (type and quantity), including water and energy
- -- the forecast, by type and quantity, of the expected residual liquid, solid and gaseous pollutants, radiation, noise, vibration and odours, resulting from the operation of the proposed project
- -- the envisaged contribution to employment, temporary and

permanent

- -- the outline of the main alternatives as to the site or the design of the proposed project, which can reasonably be envisaged
- 2. The description of the environment likely to be significantly affected by the proposed project, including, in particular, water, air, soil, climate, flora and fauna, the built-up environment and the landscape, taking into account the existing use of these resources
- 3. The assessment of the likely significant effects of the proposed project on the environment (direct and indirect, cumulative, short, medium and long-term, permanent and temporary positive and negative) resulting from:
- -- the physical presence of the main and associated projects
- -- the use of the resources of the environment
- -- the emission of pollutions, nuisances and waste, as well as the secondary effects linked to their elimination
- -- the risk of accidents
- 4. A description of the measures envisaged to eliminate reduce or compensate adverse effects on the environment
- 5. The description of the relationship between the proposed project and existing environmental and land-usd plans and standards for the areas likely to be affected

- 6. An explanation of the reasons for the choice of the site and design of the proposed project in preference to the other reasonable alternative, having regard, in particular, to the technical and economic characteristics of the main and associated project and to the characteristics of the environment likely to be affected
- 7. A non-technical summary of abovementioned headings

ศูนย์วิทยทรัพยากร จุฬาลงกรณ์มหาวิทยาลัย

ภาคผนวก ค

council directive of 27 June 1985 on the assessment of the effects of certain public and private project on the environment

(85/337/EEC)¹

THE COUNCIL OF THE EUROPEAN COMMUNITIES,

Having regard to the Treaty establishing the European Economic Community, and in particular Articles 100 and 235 thereof,

Having regard to the proposal from the $Commission^2$,

Having regard to the opinion of the European Parliament³,

Having regard to the opinion of the Economic and Social Committee, 4

¹OJ, No L 175, 5.7.1985, p. 40-48.

²OJ, No C 169, 9.7. 1980, p. 14.

³OJ, No C 66, 15.3. 1982, p. 89.

⁴OJ, No C 189, 27.7. 1981, p. 8.

Whereas the 1973⁵ and 1977⁶ action programmes of the European Communities on the environment, as well as the 1983⁷ action programme, the main outlines of which have been approved by the Council of the European Communities and the representatives of the Governments of the Member States, stress that the best environmental policy consists in preventing the creation of pollution or nuisances at source, rather than subsequently trying to counteract their effects; whereas they affirm the need to take effects on the environment into account at the earliest possible stage in all the technical planning and decision-making processes; whereas to that end, they provide for the implementation of procedures to evaluate such effects;

Whereas the disparities between the laws in force in the various Member States with regard to the assessment of the environmental effects of public and private projects may create unfavourable competitive conditions and thereby directly affect the functioning of the common market; whereas, therefore, it is necessary to approximate national laws in this field pursuant to Article 100 of the Treaty;

Whereas, in addition, it is necessary to achieve one of the Community's objectives in the sphere of the protection of the environment and the quality of life;

⁵OJ, No C 112, 20.12. 1973, p. 1.

⁶OJ, No C 139, 13.6. 1977, p. 1.

⁷OJ, No C 46, 17.2. 1983, p. 1.

Whereas, since the Treaty has not provided the powers required for this end, recourse should be had to Article 235 of the Treaty;

Whereas general principles for the assessment of environmental effects should be introduced with a view to supplementing and coordinating development consent procedures governing public and private projects likely to have a major effect on the environment;

Whereas development consent for public and private projects which are likely to have significant effects on the environment should be granted only after prior assessment of the likely significant environmental effects of these projects has been carried cut; whereas this assessment must be conducted on the basis of the appropriate information supplied by the developer, which may be supplemented by the authorities and by the people who may be concerned by the project in question;

Whereas the principles of the assessment of environmental effects should be harmonized, in particular with reference to the projects which should be subject to assessment, the main obligations of the developers and the content of the assessment.

Whereas projects belonging to certain types have significant effects on the environment and these projects must as a rule be subject to systematic assessment;

Whereas projects of other types may not have significant effects on the environment in every case and whereas these projects should be assessed where the Member States consider that their

characteristics so require;

Whereas, for projects which are subject to assessment, a certain minimal amount of information must be supplied, concerning the project and its effects;

Whereas the effects of a project on the environment must be assessed in order to take account of concerns to protect human health, to contribute by means of a better environment to the quality of life, to ensure maintenance of the diversity of species and to maintain the reproductive capacity of the ecosystem as a basic resource for life;

Whereas, however, this Directive should not be applied to projects the details of which are adopted by a specific act of national legislation, since the objectives of this Directive, including that of supplying information, are achieved through the legislative process;

whereas, furthermore, it may be appropriate in exceptional cases to exempt a specific project from the assessment procedures laid down by this Directive, subject to appropriate information being supplied to the Commission,

HAS ADOPTED THIS DIRECTIVE:

Article 1

1. This Directive shall apply to the assessment of the environmental effects of those public and private projects which are likely to have significant effects on the environment.

2. For the purposes of this Directive:

'project' means:

- the execution of construction works or of other installations or schemes,
- other interventions in the natural surroundings and landscape including those involving the extraction of mineral resources; 'developer' means:

the applicant for authorization for a private project or the public authority which initiates a project;

'development consent' means:

the decision of the competent authority or authorities which entitles the developer to proceed with the project.

- 3. The competent authority or authorities shall be that or those which the Member States designate as responsible for performing the duties arising from this Directive.
- 4. Project serving national defence purposes are not covered by this Directive.
- 5. This Directive shall not apply to project the details of which are adopted by a specific act of national legislation, since the objectives of this Directive, including that of supplying information, are achieved through the legislative process.

Article 2

1. Member States shall adopt all measures necessary to ensure

that, before consent is given, projects likely to have significant effects on the environment by virtue inter alia, of their nature, size or location are made subject to an assessment with regard to their effects.

These projects are defined in Article 4.

- 2. The environmental impact assessment may be integrated into the existing procedures for consent to projects in the Member States, or, failing this, into other procedures or into procedures to be established to comply with the aims of this Directive.
- 3. Member States may, in exceptional cases, exempt a specific project in whole or in part from the provisions laid down in this Directive.

In this event, the Member States shall:

- (a) consider whether another form of assessment would be appropriate and whether the information thus collected should be made available to the public;
- (b) make available to the public concerned the information relating to the exemption and the reasons for granting it;
- (c) inform the Commission, prior to granting consent, of the reasons justifying the exemption granted, and provide it with the information made available, where appropriate, to their own nationals.

The Commission shall immediately forward the documents received to the other Member States.

The Commission shall report annually to the Council on the application of this paragraph.

Article 3

The environmental impact assessment will identify, describe and assess in an appropriate manner, in the light of each individual case and in accordance with the Articles 4 to 11, the direct and indirect effects of a project on the following factors:

- human beings, fauna and flora,
- soil, water, air climate and the landscape,
- the inter-action between the factors mentioned in the first and second indents,
- material asset and the cultural heritage.

Article 4

- 1. Subject to Article 2 (3), projects of the classes listed in Annex I shall be made subject to an assessment in accordance with Articles 5 to 10.
- 2. Projects of the classes listed in Annex II shall be made subject to an assessment, in accordance with Articles 5 to 10, where Member State consider that their characteristics so require.

To this end Member States may inter alia specify certain types of projects as being subject to an assessment or may establish the criteria and/or thresholds necessary to determine which of the

projects of the classes listed in Annex II are to be subject to an assessment in accordance with Articles 5 to 10.

Article 5

- 1. In the case of projects which, pursuant to Article 4, must be subjected to an environmental impact assessment in accordance with Articles 5 to 10, Member States shall adopt the necessary measures to ensure that the developer supplies in an appropriate form the information specified in Annex III inasmuch as:
 - (a) the Member States consider that the information is relevant to a given stage of the consent procedure and to the specific characteristics of a particular project or type of project and of the environmental features likely to be affected;
 - (b) the Member States consider that a developer may reasonably be required to compile this information having regard inter alia to current knowledge and methods of assessment.
- 2. The information to be provided by the developer in accordance with paragraph 1 shall include at least:
 - a description of the project comprising information on the site, design and size of the project,
 - a description of the measures envisaged in order to avoid, reduce and, if possible, remedy significant adverse effects,

- the data required to identify and assess the main effects which the project is likely to have on the environment,
- a non-technical summary of the information mentioned in indents 1 to 3.
- 3. Where they consider it necessary, Member States shall ensure that any authorities with relevant information in their possession make this information available to the developer.

Article 6

- that the authorities likely to be concerned by the project by reason of their specific environmental responsibilities are given an opportunity to express their opinion on the request for development consent. Member States shall designate the authorities to be consulted for this purpose in general terms or in each case when the request for consent is made. The information gathered pursuant to Article 5 shall be forwarded to these authorities. Detailed arrangements for consultation shall be laid down by the Member States.
 - 2. Member States shall ensure that :
 - any request for development consent and any information gathered pursuant to Article 5 are made available to the public,
 - the public concerned is given the opportunity to express an opinion before the project is initiated.

- 3. The detailed arrangements for such information and consultation shall be determined by the Member States, which may in particular, depending on the particular characteristics of the projects or sites concerned:
 - determine the public concerned,
 - specify the places where the information can be consulted,
 - example by bill-posting within a certain radius, publication in local newspapers, organization of exhibitions with plans, drawings, tables, graphs, models,
 - determine the manner in which the public is to be consulted, for example, by written submissions, by public enquiry,
 - fix appropriate time limits for the various stages of the procedure in order to ensure that a decision is taken within a reasonable period.

Article 7

Where a Member State is aware that a project is likely to have significant effects on the environment in another Member State or where a Member State likely to be significantly affected so requests, the Member State in whose territory the project is intended to be carried out shall forward the information gathered pursuant to Article 5 to the other Member State at the same time as it makes it available

to its own nationals. Such information shall serve as a basis for any consultations necessary in the framework of the bilateral relations between two Member States on a reciprocal and equivalent basis.

Article 8

Information gathered pursuant to Article 5, 6 and 7 must be taken into consideration in the development consent procedure.

Article 9

When a decision has been taken, the competent authority or authorities shall inform the public concerned of:

- the content of the decision and any conditions attached thereto,
- the reasons and considerations on which the decision is based where the Member States' legislation so provides.

The detailed arrangements for such information shall be determined by the Member States.

If another Member State has been informed pursuant to Article 7, it will also be informed of the decision in question.

Article 10

The provisions of this Directive shall not affect the obligation on the competent authorities to respect the limitations imposed by national regulations and administrative provisions and

accepted legal practices with regard to industrial and commercial secrecy and the safeguarding of the public interest.

Where Article 7 applies, the transmission of information to another Member State and the reception of information by another Member State shall be subject to the limitations in force in the Member State in which the project is proposed.

Article 11

- 1. The Member States and the Commission shall exchange information on the experience gained in applying this Directive.
- 2. In particular, Member States shall inform the Commission of any criteria and/or thresholds adopted for the selection of the project in question, in accordance with Article 4 (2), or of the types of projects concerned which, pursuant to Article 4 (2), are subject to assessment in accordance with Article 5 to 10.
- 3. Five years after notification of this Directive, the Commission shall send the European Parliament and the Council a report on its application and effectiveness. The report shall be based on the aforementioned exchange of information.
- 4. On the basis of this exchange of information, the commission shall submit to the Council additional proposals, should this be necessary, with a view to this Directive's being applied in a sufficiently coordinated manner.

Article 12

- 1. Member States shall take the measures necessary to comply with this Directive within three years of its notification.⁸
- 2. Member States shall communicate to the Commission the texts of the provisions of national law which they adopt in the field covered by this Directive.

Article 13

The provisions of this Directive shall not affect the right of Member States to lay down stricter rules regarding scope and procedure when assessing environmental effects.

Article 14

This Directive is addressed to the Member States.

Done at Luxembourg, 27 June 1985.

For the Council

The President

A. BIONDI

 $^{^{8}{}m This}$ Directive was notified to the Member States on 3 $\,{
m July}$ 1985.

ANNEX I

PROJECTS SUBJECT TO ARTICLE 4 (1)

- 1. Crude-oil refineries (excluding undertaking manufacturing only lubricants from crude oil) and installations for the gasification and liquefaction of 500 tonnes or more of coal or bituminous shale per day.
- 2. Thermal power stations and other combustion installations with a heat output of 300 megawatts or more and nuclear power stations and other nuclear reactors (except research installations for the production and conversion of fissionable and fertile materials, whose maximum power does not exceed 1 kilowatt continuous thermal lcad).
- 3. Installations solely designed for the permanent storage or final disposal of radioactive waste.
- 4. Integrated works for the initial melting of cast-iron and steel.
- 5. Installations for the extraction of asbestos and for the processing and transformation of asbestos and products containing asbestos: for asbestos-cement products, with an annual production of more than 20,000 tonnes of finished products, for friction material, with an annual production of more than 50 tonnes of finished products, and for other uses of asbestos, utilization of more than 200 tonnes per year.

- 6. Integrated chemical installations.
- 7. Construction of motorways, express roads 9 and lines for long-distance railway traffic and of airports 10 with a basic runway length of 2,100 m or more.
- 8. Trading ports and also inland waterways and ports for inland-waterway traffic which permit the passage of vessels of over 1,350 tonnes.
- 9. Waste-disposal installations for the incineration, chemical treatment or land fill of toxic and dangerous wastes.

⁹For the purposes of the Directive, 'express road' means a road which complies with the definition in the European Agreement on main international traffic arteries of 15 November 1975.

10 For the purposes of this Directive, 'airport' means airports which comply with the definition in the 1944 Chicago Convention setting up the International Civil Aviation Organization (Annex 14).

ANNEX II

PROJECTS SUBJECT TO ARTICLE 4(2)

1. Agriculture

- (a) Projects for the restructuring of rural land holdings.
- (b) Projects for the use of uncultivated land or semi-natural areas for intensive agricultural purposes.
 - (c) Water-management projects for agriculture.
- (d) Initial afforestation where this may lead to adverse ecological changes and land reclamation for the purposes of conversion to another type of land use.
 - (e) Poultry-rearing installations.
 - (f) Pig-rearing installations.
 - (g) Salmon breeding.
 - (h) Reclamation of land from the sea.

2. Extractive industry

- (a) Extraction of peat.
- (b) Deep drillings with the exception of drillings for investigating the stability of the soil and in particular:
 - geothermal drilling.
 - drilling for the storage of nuclear waste material,
 - drilling for water supplies.
 - (c) Extraction of minerals other than metalliferous and energy-

producing minerals, such as marble, sand, gravel, shale, salt, phosphates and potash.

- (d) Extraction of coal and lignite by underground mining.
- (e) Extraction of coal and lignite by open-cast mining.
- (f) Extraction of petroleum.
- (g) Extraction of natural gas.
- (h) Extraction of ores.
- (i) Extraction of bituminous shale.
- (j) Extraction of minerals other than metalliferous and energy-producing minerals by open-cast mining.
- (k) Surface industrial installations for the extraction of coal, petroleum, natural gas and ores, as well as bituminous shale.
 - (1) Coke ovens (dry coal distillation).
 - (m) Installations for the manufacture of cement.

3. Energy industry

- (a) Industrial installations for the production of electricity, steam and hot water (unless included in Annex I).
- (b) Industrial installations for carrying gas, steam and hot water; transmission of electrical energy by overhead cables.
 - (c) Surface storage of natural gas.
 - (d) Underground storage of combustible gases.
 - (e) Surface storage of fossil fuels.
 - (f) Industrial briquetting of coal and lignite.
 - (g) Installations for the production or enrichment of nuclear

fuels.

- (h) Installations for the reprocessing of irradiated nuclear fuels.
- (i) Installation for the collection and processing of radicactive waste (unless included in Annex I).
 - (j) Installations for hydroelectric energy production.

4. Processing of metals

- (a) Iron and steelworks, including foundries, forges, drawing plants and rolling mills (unless included in Annex I).
- (b) Installations for the production, including smelting, refining, drawing and rolling, of non-ferrous metals, excluding precisus metals.
 - (c) Pressing, drawing and stamping of large castings.
 - (d) Surface treatment and coating of metals.
- (e) Boilermaking, manufacture of reservoirs, tanks and other sheet-metal containers.
- (f) Manufacture and assembly of motor vehicles and manufacture of motor-vehicle engines.
 - (g) Shipyards.
 - (h) Installations for the construction and repair of aircraft.
 - (i) Manufacture of railway equipment.
 - (j) Swaging by explosives.
- (k) Installations for the roasting and sintering of metallic ores.

5. Manufacture of glass

6. Chemical industry

- (a) Treatment of intermediate products and production of chemicals (unless included in Annex I).
- (b) Production of pesticides and pharmaceutical products, paint and varnishes, elastomers and peroxides.
- (c) Storage facilities for petroleum, petrochemical and chemical products.

7. Food industry

- (a) Manufacture of vegetable and animal oils and fats.
- (b) Packing and canning of animal and vegetable products.
- (c) Manufacture of dairy products.
- (d) Brewing and malting.
- (e) Confectionery and syrup manufacture.
- (f) Installations for the slaughter of animals.
- (g) Industrial starch manufacturing installations.
- (h) Fish-meal and fish-oil factories.
- (i) Sugar factories.

8. Textile, leather, wood and paper industries

- (a) Wool scouring, degreasing and bleaching factories.
- (b) Manufacture of fibre board, particle board and plywood.
- (c) Manufacture of pulp, paper and board.
- (d) Fibre-dyeing factories.
- (e) Cellulose-processing and production installations.

(f) Tannery and leather-dressing factories.

9. Rubber industry

Manufacture and treatment of elastomer-based products.

10. Infrastructure projects

- (a) Industrial-estate development projects.
- (b) Urban-development projects.
- (c) Ski-lifts and cable-cars.
- (d) Construction of roads, harbours, including fishing harbours, and airfields (projects not listed in Annex I).
 - (e) Canalization and flood-relief works.
- (f) Dams and other installations designed to hold water or store it on a long-term basis.
- (g) Tramways, elevated and underground railways, suspended lines or similar lines of a particular type, used exclusively or mainly for passenger transport.
 - (n) Oil and gas pipeline installations.
 - (i) Installation of long-distance aqueducts.
 - (j) Yacht marinas.

11. Other projects

- (a) Holiday villages, hotel complexes.
- (b) Permanent racing and test tracks for cars and motor cycles.
- (c) Installations for the disposal of industrial and domestic waste (unless included in Annex I).
 - (d) Waste water treatment plants.

- (e) Sludge-deposition sites.
- (f) Storage of scrap iron.
- (g) Test benches for engines, turbines or reactors.
- (h) Manufacture of artificial mineral fibres.
- (i) Manufacture, packing, loading or placing in cartridges of gunpowder and explosives.
 - (j) Knackers' yards.
- 12. Modifications to development projects included in Annex I and projects in Annex I undertaken exclusively or mainly for the development and testing of new methods or products and not used for more than one year.

ANNEX III

INFORMATION REFERRED TO IN ARTICLE 5 (1)

- 1. Description of the project, including in particular:
 - a description of the physical characteristics of the whole project and the land-use requirements during the construction and operational phases,
 - a description of the main characteristics of the production processes, for instance, nature and quantity of the materials used,

- an estimate, by type and quantity, of expected residues and emissions (water, air and soil pollution, noise, vibration, light, heat, radiation, etc.) resulting from the operation of the proposed project.
- 2. Where appropriate, and outline of the main alternatives studied by the developer and an indication of the main reasons for his choice, taking into account the environmental effects.
- 3. A description of the aspects of the environment likely to be significantly affected by the proposed project, including, in particular, population, fauna, flora, soil, water, air, climatic factors, material assets, including the architectural and archaeological heritage, landscape and the inter-relationship between the above factors.
- 4. A description 11 of the likely significant effects of the proposed project on the environment resulting from:
 - the existence of the project,
 - the use of natural resources,
- the emission of pollutants, the creation of nuisances and the elimination of waste;

and the description by the developer of the forecasting

¹¹This description should cover the direct effects and any indirect, secondary, cumulative, short, medium and long-term, permanent and temporary, positive and negative effects of the project.

methods used to assess the effects on the environment.

- 5. A description of the measures envisaged to prevent, reduce and where possible offset any significant adverse effects on the environment.
- 6. A non-technical summary of the information provided under the above headings.
- 7. An indication of any difficulties (technical deficiencies or lack of know-how) encountered by the developer in compiling the required information.

ศูนยวิทยทรัพยากร จุฬาลงกรณ์มหาวิทยาลัย

ประวัติผู้เ ขียน



นางสาวสุพิศ ต่างวิวัฒน์ เกิดวันที่ 15 มีนาคม พ.ศ. 2515 ที่อาเภอเมือง จังหวัด สระบุรี สำเร็จการศึกษาปริญญาตรีรัฐศาสตรบัณฑิต สาขาความสัมพันธ์ระหว่างประเทศ ภาค วิชาความสัมพันธ์ระหว่างประเทศ คณะรัฐศาสตร์ จุฬาลงกรณ์มหาวิทยาลัย ในปีการศึกษา 2535 และเช้าศึกษาต่อจินหลักสูตรรัฐศาสตรมหาบัณฑิต ที่จุฬาลงกรณ์มหาวิทยาลัย เมื่อ พ.ศ. 2535

> ศูนย์วิทยทรัพยากร จุฬาลงกรณ์มหาวิทยาลัย