



B · I · C · C

BONN INTERNATIONAL CENTER FOR CONVERSION · INTERNATIONALES KONVERSIONSZENTRUM BONN

paper²

United Nations
Publications related
to the Subject
of Conversion

An Annotated Bibliography

Andreas Klemmer



**UNITED NATIONS PUBLICATIONS
RELATED TO THE SUBJECT OF
CONVERSION:
AN ANNOTATED BIBLIOGRAPHY**

Andreas Klemmer

UNITED NATIONS PUBLICATIONS RELATED TO THE SUBJECT OF CONVERSION: AN ANNOTATED BIBLIOGRAPHY

CONTENTS

	Page
INTRODUCTION	3
1. APPROACHING THE SUBJECT	5
1.1. What is military conversion?	5
1.2. The analytical approach of this report	5
1.3. Obstacles	7
2. PUBLICATIONS OF UNITED NATIONS INSTITUTIONS RELATED TO MILITARY CONVERSION	9
2.1. The structural framework	9
2.2. Departments of the UN Secretariat in New York	9
2.2.1. The former Department for Economic and Social Development (DESD), and its successor, the Department for Development Support and Management Services (DDSMS)	9
2.2.2. The Center for Disarmament Affairs (CDA) in the Department for Political Affairs	12
2.2.3. The Economic Commission for Europe (ECE)	18
2.3. Semi-autonomous or autonomous organizations of the United Nations	19
2.3.1. The United Nations Institute for Disarmament Research (UNIDIR)	19
2.3.2. The United Nations Conference on Trade and Development (UNCTAD)	22
2.3.3. The United Nations University (UNU)	22
2.3.4. The United Nations Industrial Development Organization (UNIDO)	23
2.3.5. The United Nations Development Program (UNDP)	24
2.3.6. The International Labor Organization (ILO)	26
2.3.7. The United Nations Educational, Scientific and Cultural Organization (UNESCO)	30

INTRODUCTION

In the past, research in the area of military conversion was not a major focus of the departments in the UN Secretariat and the semi-autonomous and autonomous organizations of the United Nations system. Different perceptions of the concept of conversion by Member States blocked any initiative to assess the subject directly. Issues related to military conversion were addressed in the context of research on the economic and social consequences of the global armaments race. Primary efforts were dedicated to the development of standardized and refined reporting instruments for military budgets.

From the beginning of the 1980s, the United Nations directed increasing interest toward the relationship between disarmament and development. Focusing attention on the impacts of disarmament, several UN initiatives were begun regarding the potential economic consequences of disarmament measures on the national defense industries of Member States—thus dealing with one main aspect of conversion.

The signing of the INF Treaty in 1987 symbolizes the turning point in the superpowers' arms race. The numerous unilateral, bilateral and multilateral disarmament measures signed since then have reawakened an old question in a new international context—how does one convert excess military capacities for civilian use?

In the thaw following the Cold War, the growing desire of the Member States for political cooperation cleared the way for the adoption of General Assembly Resolution 44/116 J on conversion of military facilities. By that resolution the General Assembly expressed the desire to promote „an exchange of experience, within the United Nations framework, of modalities for the conversion of military resources to civilian purposes.“ In the face of this new consensus the United Nations has become an international forum for the conversion debate by sponsoring a number of conferences related to that topic. The rising number of UN publications dealing with the different aspects of conversion is a clear expression of the attention dedicated by Member States to the subject. A number of UN institutions now have mandates to research particular aspects of conversion and to assist Member States in their conversion efforts. In other words, the field research about conversion has been removed from academia and has become a major issue dealt with by the United Nations system.

This report assembles a bibliography of United Nations publications related to the subject of conversion as of September 1994. Chapter 1 gives a brief introduction to the analytical approach, defines military conversion according to the United Nations' terminology and highlights the major obstacles hampering the research. Chapter 2 indicates which institutions in the network of the United Nations organization have dealt or are dealing with the subject of conversion. It focuses not on a detailed description of the different initiatives started by these UN institutions, but rather on the resulting publications. Publications have been listed for each separate UN institution under consideration.

1. APPROACHING THE SUBJECT

1.1. What is military conversion?

In order to address military conversion and its treatment in the United Nations, it is necessary to define the phrase itself. In UN terminology, conversion is generally understood to be the process of converting military capacities for civilian use. Such military capacities include:

- Industrial plants that produce military equipment
- Military infrastructure (land property, buildings and others)
- Employees (members of the armed forces, both soldiers and civil employees, and employees of the military-industrial complex)
- Military equipment
- Professional qualification and technical skills of the members of the armed forces, scientists, technicians and in general all employees of the civil sector bound to the military by their work
- Money, spent by the government for employee wages in the different branches of the military apparatus, in order to maintain military equipment, for Research & Development programs and for the purchase of new military equipment¹

1.2. The analytical approach of this report

Which UN institutions undertake military conversion research? The analytical approach used to answer this question focuses on the organization of the United Nations. After outlining the institutional structure of the United Nations, this report tests each sub-entity for possible involvement in any activities related to military conversion.

Six institutions form the central organization of the United Nations: the General Assembly, the Security Council, the Economic and Social Council (ECOSOC), the Trusteeship Council, the International Court of Justice and the UN Secretariat. These main organs can establish assisting sub-entities on a temporary or permanent basis. In 1992, for example, about 80 different committees, conferences and commissions reported to the General Assembly (some of them on an

¹ This definition of military capacities rests on a term agreed to by an international team of experts in a special report to the General-Secretary: United Nations, Secretariat, Department of Political Affairs, Center for Disarmament Affairs, *Potential Uses of Military Related Resources for the Protection of the Environment*, Disarmament Study Series No. 25, 1993.

ad-hoc basis). Within the United Nations there also exist a small number of semi-autonomous special agencies/programs (for example, the United Nations Development Program, or UNDP). According to their statutory standing, these institutions are dependent on one of the six major organs; in practice, their autonomy is reflected in the execution of delegated tasks as well as in their complex organizational frameworks, which include separate staffs.

In addition to the central organization, there are 17 intergovernmental organizations under the institutional umbrella of the United Nations (for example, the International Labor Organization, or ILO), that are not formal UN institutions but are bound with special contracts to the UN Secretariat in New York. With the exception of the International Atomic Energy Agency (IAEA), these intergovernmental organizations have the juridical status of „special organizations of the United Nations.“

It is important to keep in mind the fine distinction between (a) the dependent commissions and committees of the main organs, and (b) the semi-autonomous and autonomous specialized agencies. The dependent commissions and committees develop their activities based upon an executive order from one of the principal UN organs. The executive orders themselves originate in resolutions adopted by the Member State representatives. Thus, each activity initiated in one of the sub-entities can be identified through its original directive from the UN Headquarters.

The case of the semi-autonomous and autonomous specialized agencies is different. These institutions have no close structural links with the main organization and do not directly work for the main UN organs. For example, a semi-autonomous organization like the United Nations Conference on Trade and Development (UNCTAD) in Geneva is formally coordinated by the Secretary-General and may receive a mandate from the General Assembly to undertake a specific research project. However, the final decisions about particular activities developed by these specialized agencies are made in the independent boards of the institutions themselves (in the case of UNCTAD, the Trade and Development Board) and can not be influenced by the Secretary-General. For this reason, and for the sake of precision, each of these specialized agencies must be reviewed separately.

1.3. Obstacles

As the headquarters of these specialized agencies are spread all over the world, such research is time consuming. In some cases requests for documents sent from New York to Europe and Asia were still pending when the final version of this report was finished.² One should note that all specialized agencies run liaison offices at the UN Secretariat in New York, which can be helpful when searching for a particular document.

At the same time, circumstances within the Secretariat can be severely strained by the complex structure of the bureaucratic apparatus. The competencies of sub-entities often appear to overlap; for instance, the Center for Disarmament Affairs (in the Department for Political Affairs), the Disarmament Commission (as a commission of the General Assembly), the Disarmament Conference (autonomous but closely cooperating with the General Assembly), the Disarmament Committee (as one of the six main committees of the General Assembly) and finally the ad-hoc commissions on disarmament (established temporarily by the Secretary-General upon the General Assembly's request) all deal with issues related to disarmament and could be involved in various activities related to military conversion. Thus the primary difficulty is identifying which institution delegated what part of the execution of a mandate to which sub-entity.

The attempt to clarify the work of the different departments of the UN Secretariat is further complicated by structural reform of the organization, which began in 1991 and was still underway at the end of 1994. In several cases the offices—even entire departments—responsible for dealing with military conversion before 1991 have been dissolved or completely reorganized. In the case of the dissolved Center for Science and Technology for Development, the former staff members involved with conversion have been sent to different departments, where some of them now work on different issues. In another example, the former Department for International Economic and Social Affairs has been transformed into three separate new Departments, while its former Science, Technology, Environment and Resources Division—which had been actively involved in conversion research—has also been regrouped.

Under such circumstances the activities of these former divisions are often unclear and gaining access to their publications is difficult. The research for such a document can be useless if the UN

² Such has been the case with UNIDO in Vienna, with UNESCO in Paris and with the UNU in Tokyo. In the respective sections of Chapter 2 these cases and the documents under question are described in detail.

libraries have not kept any reference copies. In isolated incidents, such documents were catalogued but for varying reasons were not available.

A special problem exists in the 'internal studies' that are prepared within a department or are commissioned by the UN in independent research institutes. In most cases, these internal studies are used as data/information resources for the final reports of ad-hoc expert commissions for the General Assembly. Some of them circulate only as classified documents, while others are published independently with the authorization of the United Nations. Complete lists of these internal studies do not exist, and the libraries do not necessarily keep reference copies of each of them—even though they might do so.

2. PUBLICATIONS OF UNITED NATIONS INSTITUTIONS RELATED TO MILITARY CONVERSION

2.1. The structural framework

The following framework briefly refers to each of the main organs of the United Nations and each specialized agency or program under the UN's institutional umbrella that has developed activities related to military conversion. The main focus does not lie on detailed descriptions of these activities themselves but rather on the publications that are produced.

Each section lists the articles, reports and other works published by one of the institutions—if such information was available. A contact address is also provided where available. It should therefore be possible for future researchers to target their efforts directly to the most relevant sources.

2.2. Departments of the UN Secretariat in New York

2.2.1. The former Department for Economic and Social Development (DESD), and its successor, the Department for Development Support and Management Services (DDSMS)

One of the institutions within the central organization of the United Nations involved with military conversion was the Center for Science and Technology for Development (CSTD) in the Department for Economic and Social Development (DESD). The Center took on primary responsibility for organizing two international conferences on conversion in Beijing, China and Dortmund, Germany. The first conference was held in Beijing on 24–27 October 1991, and emphasized strengthening international initiatives for cooperation in the field of conversion. The follow-up conference in Dortmund dealt with the relationship between conversion, development and the environment. The CSTD published documents reviewing both conferences.

After the dissolution of the Center in 1992, it became the task of the Science, Technology, Energy, Environment and Natural Resources Division of DESD to organize an international follow-up conference on the conversion of the aerospace complex with the government of the Russian Federation.³ This conference took place in Moscow on 12–17 October 1992. A summary of that

³ In the same year an interdepartmental task force on conversion (for sustainable development) was established upon the request of the Secretary-General. The implementation of the task force was organized

conference has been published as a special issue of the *ATAS Bulletin*, a publication series of the CSTD that was continued after its dissolution.

In 1993, the Secretary-General decided to re-organize the DESD as part of the general structural reform of the United Nations. DESD has thus been divided into three Departments: the Department for Policy Coordination and Sustainable Development, the Department for Economic and Social Information and Policy Analysis and the Department for Development Support and Management Services (DDSMS). In the midst of that reorganization process the responsibility for a fourth international follow-up conference on conversion was left in the hands of the Office for Legal Advisory Services for Development in the DDSMS. That conference was held in the summer of 1993 in Hong Kong. A publication surveying that conference was under preparation in summer 1994.

DESD also developed research activities related to the economic and social consequences of the armaments race. In the context of that research, a chapter about the general aspects of a worldwide cut in military expenses was added to the 1991 issue of the Department's annual *World Economic Survey*. The subject of disarmament and military conversion is also discussed in a chapter of the *World Economic Survey 1992*, with the principal emphasis on the potential peace dividend of disarmament; that research was undertaken by the Division of Development, Policy and Analysis in the DESD.

One of the contact persons with knowledge about the work of the former Center for Science and Technology for Development is:

Ms. Jaiyan Qian
United Nations
D.D. 1-604
New York, NY 10017, USA
Telephone: (212)-963-3393

One of the former staff members of the CSTD, Mr. Erazm Omeljanovsky, has been appointed as special adviser on military conversion to the Undersecretary-General of the new DDSMS. He can be contacted at the following address:

by the DESD. The panel met four times between June 1992 and January 1993 in order to coordinate the multiple conversion activities of the several UN Secretariat departments and the specialized agencies.

Mr. Erazm Omeljanovsky

Social Adviser on Military Conversion Matters to the Undersecretary-General
Department for Development Support and Management Services

D.C.1-1038

New York, NY 10017 USA

Telephone: (212) 963-3266

Publications of the former DESD, and its successor, the DDSMS

Baehr, Lutz, Anke Brunn and Hans-Jürgen Karpe, ed. 1992. *Conversion. Opportunities for Development and Environment*. New York: Berlin University. (461 pages).

Conference proceedings of an international conference held in Dortmund, Germany, jointly organized by the United Nations Center for Science and Technology for Development and the Ministry of Higher Education and Research of the State of North Rhine Westphalia. The conference proceedings provide an edited version of the papers presented by conference participants. The papers deal specifically with the opportunities and constraints inherent in the reallocation of savings from military activities toward socioeconomic development and the protection of the environment.

„Conversion and the Peace Dividend: Prospects and Emerging Policy Issues in the Developed Market Economies.“ [1992] *World Economic Survey 1992: Current Trends and Policies in the World Economy*. New York: DESD, pp. 121–138.

Key issues: The peace dividend. Benefits and burdens of defense spending. Costs and benefits of disarmament.

United Nations. Secretariat. Department for Economic and Social Development. Center for Science and Technology for Development. 1992. *International Cooperation in Peaceful Use of Military Industrial Technology*. New York.

Proceedings of an international conference organized by the China Association for the Peaceful Use of Military Industry and Technology and the former United Nations Center for Science and Technology for Development, with the participation of the former United Nations Department for Disarmament Affairs, held in Beijing on 22–25 October 1991.

United Nations. Secretariat. Department for Economic and Social Development. 1993. *Report of the United Nations Conference on Conversion of the Aerospace Complex*. New York. (68 pages).

Conference proceedings of the United Nations Conference on Conversion of the Aerospace Complex, organized by the Department of Economic and Social Development in cooperation with the government of the Russian Federation and held in Moscow from 12-17 October 1992. The conference identified and assessed the aerospace technologies suitable for dual-use and conversion that have the potential for secondary applications and spin-offs in development-related applications. It examined those areas of international cooperation that are most likely to ensure access to such technologies by interested developing countries and countries in transition. The conference also focused on science and technology policy options as well as commercialization and legal issues, in order to: (1) facilitate technological change in the context of development objectives and strategies; (2) help identify the main barriers and possible bottlenecks of this process; and (3) understand the nature of such barriers and propose a portfolio of options.

United Nations. Department for Development Support and Management Services. Office of Legal Advisory Services for Development. *Restructuring the Military Industry: Conversion for the Development of the Civilian Economy*. Hong Kong. (to be released).

Proceedings of an international conference organized by the China Association for the Peaceful Use of Military Industry and Technology and the former Office of Legal Advisory Services for Development, held in Hong Kong from 7–11 July 1993.

„Some Economic Aspects of Military Expenditure in the Light of the End of the Cold War.“ [1991] *World Economic Survey 1991*. New York: DESD, pp. 171–188.

Key issues: The economic rationale for defense spending. Security and military spending in different countries. The outlook for military spending. Issues involved in the transition to lower military expenditures.

2.2.2. The Center for Disarmament Affairs (CDA) in the Department for Political Affairs

The Center for Disarmament Affairs (CDA) in the Department of Political Affairs of the UN Secretariat is responsible for reporting on all issues related to disarmament and international security upon request of the intergovernmental institutions of the United Nations.

A number of publications published by the CDA focus on the issue of conversion; some of them have been published in the Center's two study series, the *Disarmament Topical Papers* and the *Disarmament Study Series*.⁴ The *Disarmament Topical Papers* present the working papers of expert groups interested in disarmament and arms control in order to make information accessible to the wider public. The *Disarmament Study Series* is the CDA's forum for special reports of international, ad-hoc, expert committees concerning disarmament and international security—the General Assembly can request the Secretary-General to establish such committees to prepare these reports. If the complexity of the issue makes it necessary and the financial contributions of the Member States make it possible, the committees' research may be supplemented by working papers of UN offices, specialized agencies and/or independent institutes. The final report of the expert panel may use these internal studies as resources.⁵

The growing international interest in military conversion has been reflected in the number of relevant articles published in *Disarmament: A Periodic Review of the United Nations*,⁶ one of two journals of the CDA. All annual publications of the CDA are listed in its *Disarmament Yearbook*, which provides an overview of the activities of all UN institutions working in the field of disarmament.⁷

⁴ The *Disarmament Facts and Information Papers* of the CDA, small journals that provide information in layman's terms about issues related to disarmament (for instance, Treaty texts), also deserve mention. However, the subject of military conversion has not yet been dealt with in these journals.

⁵ An example is the special report of the Secretary-General describing the relationship between disarmament and development, in which subject of conversion is mentioned briefly. Paragraph 94 of the final document of the 10. special session of the General Assembly had requested the Secretary-general to prepare such a report; the Secretary-general thus established an ad-hoc commission of 27 experts that worked together between 1978 and 1981. Their final report is based on 40 working papers commissioned in 1980 in independent research centers and institutes. Of these, 21 were made possible by Member States' financial contributions to a special fund. Another 19 studies were prepared under the financial responsibility of particular Member States. The final version of the special report was presented to the Secretary-general in 1982 and published as *Disarmament Study No.5* by the CDA.

⁶ The second journal published by the CDA, the *Disarmament Newsletter*, consists of brief, newspaper-like articles which summarize UN resolutions and activities related to the issues of disarmament and arms control.

⁷ In the *Disarmament Yearbooks* one can also find the bibliographical notes about a small number of monographs published by the CDA since 1985. These publications deal primarily with the results of a number of international conferences about disarmament; conversion issues are not included within their scope.

The contact in the Center for Disarmament Affairs for all questions related to conversion is:

Ms. Swadesh Rana
United Nations
S-3333C
New York, NY 10017 USA
Telephone: (212) 963-2685

Publications of CDA

Articles

Avramovic, Dragoslav. 1986. „Economic Constraints on Armament in the Mid-1980s.“ *Disarmament: A Periodic Review*. Volume IX, No.1, pp. 3–7.

Analysis of the correlation between the general deceleration of economic growth in the mid-1980s and the defense expenditures of selected countries.

Battistelli, Fabrizio and Alberto Castagnola. 1990. „International Dialogue and the Conversion of the Armaments Industry.“ *Disarmament: A Periodic Review*. Volume XIII, No.2, pp. 185–196.

Key issues: Conversion hypotheses in the past and present. Conversion constraints and prospects. The process of conversion in Italy: a brief case study.

Dumas, Lloyd J. 1990. „Economic Conversion: Preparing for Peace.“ *Disarmament: A Periodic Review*. Volume XIII, No.2, pp. 197–209.

Key issues: Obstacles to the conversion process. Strategies for successful conversion (an „Action Agenda for Conversion“).

Izyumov, Alexei. 1991. „Conversion: Economic Adjustment in an Area of Arms Reduction. The National Experience of the USSR.“ *Disarmament: A Periodic Review*. Volume XIV, No.1, pp. 53–70.

Conversion in Russia: a case study. Assesses the size and nature of the Soviet military economy and the Soviet experience in conversion. Special focus on the obstacles and opportunities for conversion in times of economic reform.

Kozyrev, Andrei V. 1991. „Conversion of weapons, armed forces, personnel and industry.“ *Challenges to Multilateral Disarmament in the Post Cold-War and Post Gulf-War Period: Disarmament Topical Papers No.8*. New York: CDA, pp. 246–252.

General summary of the prospects and constraints for conversion after the end of the Cold War.

Palankai, Tibor. 1990. „Conversion: The Hungarian Case: Prospects and Problems in the late 1980s and early 1990s.“ *Disarmament: A Periodic Review*. Volume XIII, No.2, pp. 210–230.

Conversion in Hungary: a case study.

Roberts, Adam. 1991. „Conversion Concepts and Approaches.“ *Disarmament: A Periodic Review*. Volume XIV, No.1, pp. 71–94.

A review of conversion concepts in the past and present.

Thorsson, Inga. 1986. „The Relationship between Disarmament and Development: The Swedish Follow-Up Study.“ *Disarmament: A Periodic Review*. Volume IX, No.1, pp. 80–89.

Executive summary of a study about the economic and social consequences of Sweden's defense efforts and of the possibility of a reallocation of resources in conjunction with any disarmament initiated by the Great Powers.

Wulf, Herbert. 1991. „Specific Issues of Conversion: Industries and Trade.“ *Disarmament: A Periodic Review*. Volume XIV, No.1, pp. 95–123.

Brief summary of the general political and economic background after 1989, with a list of existing factors favorable to conversion. Describes the volume of the arms trade and the size of the arms industry, based on statistics of the Stockholm International Peace Research Institute (SIPRI). Predicts how financial constraints on military expenditure after the end of the Cold War and a conventional arms control agreement (under negotiation by then) would impact the arms industry and armed forces.

Studies

Boutros-Ghali, Boutros. 1991. *General and Complete Disarmament: Conversion of Military Resources to Civilian Purposes, Report of the Secretary-General*. New York: United Nations. (17 pages).

On 15 December 1989, the General Assembly adopted resolution 44/116 J, entitled „Conversion of military resources,“ by which it invited Member States to submit to the Secretary-General their views concerning various aspects of the conversion of military resources to civilian purposes. Replies were received from Belarus, Brunei, Darassalam, Bulgaria, China, Cuba, Liechtenstein, Norway, Panama, Peru, the Philippines and the USSR, and are reproduced in this report.

Boutros-Ghali, Boutros. 1993. *International Cooperation in Space Activities for Enhancing Security in the Post-Cold War era, Report of the Secretary-General*. New York: United Nations. (41 pages).

Report mentioning the challenges and prospects of converting military space technology.

Boutros-Ghali, Boutros. 1992. *New Dimensions of Arms Regulation and Disarmament in the Post-Cold War Era, Report of Secretary-General Boutros Boutros-Ghali on the Occasion of Disarmament Week, 27 October 1992*. New York: United Nations. (53 pages).

Report mentioning the issue of conversion as one of the post-Cold War challenges arising out of the process of disarmament.

Gold, Harold, ed. 1985. *Making the Connection: Disarmament, Development and Economic Conversion: A Reader*. New York: NGO Liaison Service.

Gold, Harold, ed. 1985. *Making the Connection: Disarmament, Development and Economic Conversion: A Resource Guide*. New York: NGO Liaison Service.

Hammarskjold, Dag. 1962. *Economic and Social Consequences of Disarmament, Report of the Secretary-General*. New York: United Nations.

Report prepared by a group of experts appointed by Secretary-General Dag Hammarskjold to assist him in conducting a study of the economic and social consequences of disarmament in countries with different economic systems and at different stages of economic development. Special attention was directed toward the following points: (1) the impact of disarmament on national production and employment; (2) structural problems of conversion; (3) the impact of disarmament on international economic relations; (4) the effect of disarmament on the volume and framework of aid for economic development; and (5) the social consequences of disarmament.

Hammarskjöld, Dag. 1966. *Economic and Social Consequences of Disarmament. Conversion to Peaceful Needs of the Resources Released by Disarmament, Note by the Secretary-General and replies of Governments.* New York: United Nations.

In resolution 1087 (XXXIX) of 30 July 1965, the Economic and Social Council of the United Nations requested that the Secretary-General inform it of any national and international studies he received concerning the economic and social consequences of disarmament. Pursuant to this request, the Secretary-general circulated in 1965 a 'note verbale' inviting Governments to provide the appropriate information. The note verbale was accompanied by a 'framework,' which classified various aspects of concern, and by a 'questionnaire' designed by the Inter-Agency Committee on the Conversion to Peaceful Needs of the Resources Released by Disarmament. The replies received from Governments were brought together and published in this report.

United Nations. Secretariat. Department of Political Affairs. Center for Disarmament Affairs. 1991. *Conversion: Economic Adjustments in an Era of Arms Reduction.* Disarmament Topical Papers No.5. (2 Vols.). New York. (188 pages and 305 pages).

Collection of research papers presented by the UN conference on „Conversion: economic adjustment in an era of arms reduction,“ held in Moscow on 3–17 August 1990. The first volume features the major statements and committee reports. The second volume presents the commissioned analyses of various national experiences and selected functional issues.

United Nations. Secretariat. Department of Political Affairs. Center for Disarmament Affairs. 1993. *Potential Uses of Military Related Resources for Protection of the Environment.* Disarmament Study Series No. 25. New York. (54 pages).

Study examining the potential of worldwide military establishments for augmenting the civilian capabilities of the international community to meet the environmental challenge. In its recommendations to national governments, the study asks for a cost-benefit analysis of the search for new resources for environmental protection compared to the utilization of those already allocated to the military sector. The environmental challenge is essentially global; military-related resources are inherently national. This study, therefore, recommends that mechanisms should be explored for making global use of national resources, to be put at the disposal of the international community. It asks the United Nations to assume greater responsibilities for strengthening the multilateral response to environmental emergencies.

United Nations. Secretariat. Department of Political Affairs. Center for Disarmament Affairs. 1986. *Reduction of Military Budgets. Construction of military price indexes and purchasing-power parities for comparison of military expenditures.* Disarmament Study Series No.15. New York. (79 pages).

Construction of military price indexes and purchasing-power parities for the comparison of military expenditures.

United Nations. Secretariat. Department of Political Affairs. Center for Disarmament Affairs. 1981. *Reduction of Military Budgets. International reporting of military expenditures.* Disarmament Study Series No.4. New York. (140 pages).

Report by a group of governmental experts on instruments used for reporting military budgets, including tests and recommendations for improvements.

United Nations. Secretariat. Department of Political Affairs. Center for Disarmament Affairs. 1977. *Reduction of military budgets. Measurement and international reporting of military expenditures.* New York.

Report prepared by a group of governmental experts on the reduction of military budgets. Analyzes and examines the following: (1) the definition and scope of the military sector and of military expenditures, as well as the classification and structure of expenditures within military budgets; (2) the valuation of resources in the military sector—considering different economic systems and different structures of production within military sectors—with the purpose of examining relationships between resources and military output; (3) the deflation for price change in military production in different countries, with the aim of examining methods of measuring real expenditure trends over a period of time (taking into account differences between countries in the rate of the price change); and (4) the international value comparison and exchange rates relevant to military production, with the purpose of examining methods for accurate currency comparison of military expenditures.

United Nations. Secretariat. Department of Political Affairs. Center for Disarmament Affairs. 1983. *Reduction of Military Budgets. Refinement of international reporting and comparison of military expenditures.* Disarmament Study Series No.10. New York. (40 pages).

Report of a group of governmental experts on the refinement of reporting instruments for military budgets. Examines the issue of comparing military expenditures among different states and between different years.

United Nations. Secretariat. Department of Political Affairs. Center for Disarmament Affairs. 1975. *Reduction of the military budgets of States permanent members of the Security Council by 10 percent and utilization of part of the funds thus saved to provide assistance to developing countries.* New York. (39 pages).

Report prepared by a group of governmental experts on the reduction of the military budgets of the Permanent Members of the Security Council (and other selected States with major economic and military potential) and on the utilization of part of the funds saved to provide international assistance to developing countries.

United Nations. Secretariat. Department of Political Affairs. Center for Disarmament Affairs. 1982. *The Relationship between Disarmament and Development.* Disarmament Study Series No.5. New York. (154 pages).

Report assessing the economic and social effects of a continuing arms race in comparison to the implementation of disarmament measures. Focuses in particular on conversion and the redeployment of resources, released from military purposes through disarmament measures, toward economic and social development. In addition, discusses possible institutional measures for the international reallocation of resources from armaments to development.

United Nations. Secretariat. Department of Political Affairs. Center for Disarmament Affairs. 1989. *Study on the Economic and Social Consequences of the Arms Race and Military Expenditures.* Disarmament Study Series No.26. New York.

Working papers for the special reports of the Secretary-General

Bjerkholt, Olav and Adne U.A. Cappelen. 1980. „Disarmament and Development: A Study of Conversion in Norway.“ Report prepared by the International Peace Research Institute for the United Nations, Oslo.

Study assessing the economic impact of disarmament and conversion in Norway.

Bjerkholt, Olav and Adne U.A. Cappelen. 1982. „Global Conversion from Arms to Development Aid: Macroeconomic Effects in Norway.“ Report by the International Peace Research Institute for the United Nations, Oslo.

Report considering the global effects of disarmament and conversion as well as the impact of global measures on the Norwegian economy.

Frensborg, Olof and Peter Wallensteen. 1980. „New Wine and Old Bottles. Product versus Organization: Swedish Experience in Changing from Military to Civilian Production.“ Report of the Department of Peace and Conflict Research of the Uppsala for the United Nations Group of Governmental Experts on the Relationship between Disarmament and Development, Sweden. (6 pages).

Study reporting the development of the two Swedish arms industries from the early 1930s to the late 1960s, covering their experience in shifting from civilian to military production and then back to civilian manufacture again.

Hveem, Helge and Raino Malnes. 1980. „Military Use of Natural Resources: The Case for Conversion and Control.“ Report prepared by the International Peace Research Institute for the United Nations Group of Governmental Experts on the Relationship between Disarmament and Development, Oslo.

Report examining the extent, patterns and implications of military use of natural resources of the world. Focuses in particular on the military consumption of natural resources and control over strategic minerals.

Melman, Seymour. 1980. „Barriers to Conversion from Military to Civilian Industry in Market, Planned and Developing Economies.“ Report by Melman Seymour, Professor of Industrial Engineering at the Columbia University for the United Nations Group of Governmental Experts on the Relationship between Disarmament and Development, New York. (71 pages).

Comparative analysis of barriers to conversion from military to civilian industry in different economic systems at different stages of development. The United States, Great Britain and Germany constitute the market economy section. The USSR is selected to illustrate countries with planned economies, while Egypt, Israel and India represent developing countries.

Rogalski, Michel and Carlos Yakubovich. 1980. „Reflections on Conversion Strategies for Armament-Related Arms Industries.“ Report prepared by the Ecole de Hautes Etudes en Sciences Sociales in the Center International de Recherche sur L'Environnement et le Developpement for the United Nations Group of Governmental Experts on the Relationship between Disarmament and Development. (70 pages).

Study exploring general strategies for the conversion of arms-related industries.

2.2.3. The Economic Commission for Europe (ECE)

The Economic Commission for Europe (ECE), which reports to the Economic and Social Council (ECOSOC), refers in two working papers to the subject of conversion. The first of these working papers, published in 1992, concentrates on the transition in Eastern Europe and deals in particular with the function of foreign capital in the conversion of the military-industrial complex.

The second document, released on 19 April 1994, introduces the 'Energy Efficiency 2000 Project' initiated by the Committee on Energy, a sub-entity of the ECE. As part of this project, a working group of that committee held an „Ad-Hoc Meeting on the Conversion of Military Facilities and Manufacturing to the Production of Energy Efficient Technology“ in Ceska Lipa (Czech Republic) on 29–31 March of 1994. The ECE has therefore been involved in the establishment of Energy Efficiency Demonstration Zones in Eastern Europe.

Publications of the ECE

United Nations. Economic Commission for Europe. Committee on the Development of Trade. 1992. *Defense Conversion in Economies in Transition: The Role of Foreign Capital*. New York. (12 pages).

Converting the defense sector to civilian purposes is an enormous task for the countries of Eastern Europe, especially in Russia, the Ukraine and the Slovak region of the Czech Republic where the concentration of defense-related industries is greatest. The conversion of the defense sector amounts to a crucial challenge to the speed and success of economic restructuring and the transition to a market economy. The paper provides a survey of the scale of the challenge and the possible contribution foreign investment and other policy measures could make in dealing with it.

United Nations. Economic Commission for Europe. Committee on Energy. 1994. *Ad Hoc Meeting on the Conversion of Military Facilities and Manufacturing to the Production in Energy Efficient Technology, held at Ceska Lipa (Czech Republic) 29-31 March 1994*. New York. (15 pages).

Record of an ad-hoc meeting of the steering committee on the Energy Efficiency 2000 Project on the conversion of military facilities and manufacturing to the production of energy efficient technology. Discusses the establishment of an energy efficient zone in the Ceska Lipa region of Northern Bohemia. The demonstration zone covers a region of approximately 250 square kilometers housing former military training bases, an airport, a uranium mine and local townships associated with the mine and the base. The intention of the demonstration zone is to develop a modern, environmentally-sound and energy-efficient infrastructure in that area.

2.3. Semi-autonomous or autonomous organizations of the United Nations

2.3.1. The United Nations Institute for Disarmament Research (UNIDIR)

In 1980 the United Nations Institute for Disarmament Research (UNIDIR) was founded with its seat in Geneva. The Institute cooperates closely with the Center for Disarmament Affairs at the UN Secretariat in New York. UNIDIR began to research military conversion in 1990, when it was requested by the General Assembly to prepare a report about the economy of conversion.⁸ Since then, UNIDIR has dealt with the subject in a number of publications and articles; the former have been released as issues of the two study series of the Institute, the *Research Papers* and the *Research Reports*, while the latter have been published in the Institute's journal, the *UNIDIR Newsletter*. The annual publications of UNIDIR are listed in the CDA's *Disarmament Yearbook*.

UNIDIR has cooperated repeatedly with other UN organizations. For instance, UNIDIR Research Paper No.10, entitled „Disarmament, Environment and Development and their Relevance to the Least Developed Countries,“ was prepared in cooperation with the United Nations Environment Program (UNEP).

Publications of UNIDIR

Articles

Bhaduri, Amman. 1992. „Disarmament and Development.“ *UNIDIR Newsletter*. No. 19, September, pp. 12–14.
Brief review of the relationship between disarmament and development.

Bougrov, Evgeny V. 1992. „Conversion in Transitional Economies: The Case of Russia.“ *UNIDIR Newsletter*. No.19, September, pp. 18–20.
Brief review of a case study on conversion in Russia.

Egea Nadal, Alejandro. 1992. „The Economic Implications of Military R&D.“ *UNIDIR Newsletter*. No.19, September, pp. 15–17.
Brief review of the economic implications of military R&D, including such issues as expenditures in military R&D, the question of spin-offs and crowding-out effects on civilian R&D.

Fontanel, Jacques. 1992. „Defense Spending—Burden or Benefit?“ *UNIDIR Newsletter*, No.19, September, pp. 5–7.
Brief review of economic theories and econometric analyses assessing the opportunity costs of defense expenditure and the costs of disarmament.

⁸ See General Assembly Resolution 45/62 G (paragraph 7), 12 April 1990.

Hartley, Keith. 1992. „The Economic Aspects of Disarmament.“ *UNIDIR Newsletter*. No.19, September, pp. 3–4.
Brief review of the costs and benefits of disarmament.

Intriligator, Michael D. 1992. „The Economics of Disarmament as an Investment Process.“ *UNIDIR Newsletter*. No.19, September, pp. 7–9.
Brief outline of the view of disarmament as a type of investment process where an expenditure at the present time is followed eventually by a return on the investment. Explains and evaluates this approach.

Saadet, Deger and Sonmath Sen. 1992. „Economic Security in the Era of Disarmament.“ *UNIDIR Newsletter*. No.19, September, pp. 10–12.
Focuses on the importance of economic security and its role for global stability with the end of bi-polar conflict between the super-powers yet continuing conflicts in the Third World.

Studies

Hartley, Keith, Amit Bhaduri, Evgueni Vladimirovich Bougrov, Saadet Deger, Ali E. Hillal Dessouki, Jacques Fontanel, Hendrik de Haan, Michael D. Intriligator, and Alejandro Nadal Egea. 1993. *Economic Aspects of Disarmament: Disarmament as an Investment Process*. New York: UNIDIR. (91 pages).
Report assessing the costs and benefits of defense spending. In particular, addresses such topics as the nature and characteristics of available data on defense expenditure; the economics of defense markets; military R&D, arms exports, arms race and arms limitation issues; the relationship between disarmament and development; economic adjustment and conversion; and the peace dividend.

Quagrham, Sonia Ben. 1993. *Le disarmement et la conversion de l'industrie militaire en Russie*. Research Paper No.24. Geneva: UNIDIR. (110 pages).
Report evaluating the extent to which disarmament accords have affected the Russian armed forces and defense industries. As part of this evaluation, the author reviews the conversion process in Russia in both the past and present, pointing out problems and prospects.

Renner, Michael. 1992. *Economic Adjustment after the Cold War: Strategies for Conversion*. Geneva: UNIDIR. (264 pages).
The INF and CFE Treaty and the signing of START in 1991 have focused attention on both the reduction of the military-industrial sectors in many countries and the redeployment of human and material resources hitherto used for military purposes. These practical implications of disarmament—in terms of economic adjustment—are assessed by this study, which examines the different facets of the adjustment problem before outlining the experience of specific countries. The structural characteristics of the economies of several European countries are analyzed in detail and their adjustment strategies and policies are reviewed. The final summary draws conclusions on a preferred path for the adjustment process.

Sur, Serge. 1991. *Disarmaments Agreements and Negotiations: The Economic Dimensions*. Geneva: UNIDIR. (228 pages).
The acceleration of the pace of disarmament in the aftermath of improved US-USSR relations and the signature of the INF and CFE Treaties led to a fresh approach to the economic aspects of disarmament. This has involved emphasizing the process of adjustment to the implementation of disarmament treaties, as well as the reality of the costs of disarmament in terms of human and material resources. In this context UNIDIR, in association with the International Defense Economics Association, organized a workshop in St. Petersburg, Russia in July 1990 on the subject. The papers presented during that workshop, which constitute this publication, deal in particular with the economic aspects of the INF treaty and the START negotiations, the economic problems of conventional disarmament in Europe, the economic consequences of East-West disarmament for developing countries and the economic implications of a Chemical Weapons Convention.

Thee, Marek. 1990. *Science and Technology: Between Civilian and Military Research and Development—Armaments and Development at Variance*. Research Paper No.7. Geneva: UNIDIR. (23 pages).

Report assessing the double-edged nature of science and technology, mapping the global civilian and military R&D and identifying the nature and characteristics of R&D data and activity. Focuses on scientific-technological manpower and the share of military R&D, and isolates the financial resources of civilian and military R&D.

United Nations Institute for Disarmament Research. 1991. *Disarmament, Environment, and Development and their Relevance to the Least-Developed Countries*. Research Paper No.10. New York: UNIDIR. (107 pages).

Study providing an overall framework for action in which the relevance of disarmament, environment and development for comprehensive human security in the least-developed countries (LDCs) is considered. The problem is approached from four distinct directions: from the perspective of the biosphere, from the perspective of the LDCs, from the perspective of highly-developed countries and from the perspective of intergovernmental agencies. Deals with the relevance of the military sector to comprehensive human security. The analysis is followed by some suggestions for the achievement of sustainable development with equity by the LDCs.

United Nations Institute for Disarmament Research. 1992. „Economic Aspects of Disarmament.“ *UNIDIR Newsletter*. No.19, September. (37 pages).

Special issue of the UNIDIR Newsletter reviewing the results of a 1992 UNIDIR research report on, „Economic aspects of disarmament.“ That report examined and presented different methodologies for analyzing and forecasting the economic effects of disarmament and for evaluating public policies which may accompany conversion and transition processes.

Vyrynen, Raimo. 1992. *Military Industrialization and Economic Development: Theory and Historical Case Studies*. Dartmouth: Aldershot.

Report probing the assumption that military industrialization has „spin-off“ benefits for economic development and examining the linkage between military and civilian industries. Reviews specific case studies (Japan 1868–1914, Britain 1897–1914, Brazil 1960–1990 and the United States 1960–1990) and argues the thesis that although military industrialization often has detrimental economic consequences, other variables—such as a country’s general economic performance and its relationship to the global economic environment—are also important.

2.3.2. The United Nations Conference on Trade and Development (UNCTAD)

In 1992, the Secretary-General decided to delegate part of the responsibilities of the former Center for Science and Technology for Development (CSTD) in the UN Secretariat to the UN Conference on Trade and Development (UNCTAD) in Geneva; in particular, UNCTAD received a mandate to explore how it could further contribute to conversion research. In late 1992, UNCTAD established an ad-hoc working group to define guidelines on how the institution could investigate „the issue of structural adjustment for the transition to disarmament.“⁹ This potential field of investigation was also the subject of a 1993 report prepared by the UNCTAD Secretariat which briefly summarized the conversion activities of UN institutions to date. By summer 1994, however, the working group had not yet set a definite agenda for the future conversion activities of UNCTAD.¹⁰

A contact person within UNCTAD is:

Mr. Serguey Safrenov
Development Strategies Division
UNCTAD
Palais des Nations
1211 Geneva
Switzerland
Telephone: 41-22-907-5843

Publications of UNCTAD

United Nations Conference on Trade and Development. 1993. *Report on the Activities of the United Nations System in the Area of Structural Adjustment for the Transition to Disarmament, prepared by the Secretariat of UNCTAD in Response to Trade and Development Board Decision 399 (XXXIX), paragraph 2 (a), 17.02.1993*. Geneva. (12 pages).

At the eighth session of the UN Conference on Trade and Development, the Member States agreed that UNCTAD, with appropriate support from the Secretariat, should explore the issues of structural adjustment to the transition to disarmament, the implications for world economic growth and development, and the economic aspect of conversion of military capacities to civilian uses. In implementing that agreement, the Trade and Development Board established an ad-hoc working group requested to explore the issue of structural adjustment to the transition to disarmament and that the Secretary-general of UNCTAD prepare a report on the activities of other United Nations organizations in this area, indicating where UNCTAD could best play a role.

2.3.3. The United Nations University (UNU)

As the above-cited UNCTAD report points out, the University of the United Nations (UNU) has been planning to publish two documents related to the subject of conversion. According to the New York UNU Liaison office, one of these documents—a study on the structure of Europe after the end of the Cold War—had still not been released by the summer of 1994. The second document, a

⁹ See Trade and Development Board decision 399 (XXXIX), 10 September 1992.

summary of an international conference on disarmament and economic development held 4–6 November 1992 in Tokyo, required an application to Japan; at the time this report went to print, the application was still pending, along with a request for further information about possible UNU activities in the field of conversion.

The contact office of the UNU in New York is:

UNU Liaison-Office
D.C. 2-1462
New York, NY 10017 USA
Telephone: (212) 963-6346

Publications of the UNU

United Nations University. 1993. *Proceedings of the Tokyo Conference on Arms Reduction and Economic Development in the Post Cold War Era, held in Tokyo 4-6 November 1992*. Tokyo.

United Nations University. *The Real New Europe or Actually Existing Europe: The Transition from Cold War Systems to What? A joint UNU/Wider research project*. Tokyo. (to be released).

2.3.4. The United Nations Industrial Development Organization (UNIDO)

The United Nations Industrial Development Organization (UNIDO) based in Vienna initiated a program called, „Conversion through Enterprise Development“ in 1991. The UNIDO program focuses on Eastern Europe and tries to assist business communities in both the East and the West that are engaged in converting East European military-industrial plants. For example, UNIDO has assisted with the conversion of the Kirovsky plant near St. Petersburg in Russia; the production of that plant had been converted from arms to wheelchairs by 1994. UNIDO was also one sponsor of a feasibility study that explored the prospects of such a project. The request for a copy of that feasibility study was pending in New York and in Vienna at the time this report went to print. Thus far, the New York office of UNIDO has provided a brief memorandum about the Kirovsky plant itself and recent developments of the conversion effort.

¹⁰ See the written statement of Turkish Ambassador Akatan for a draft version of the report of the Trade and Development Board for its 40th session, released at the 28 April 1994, UN registration symbol TD/B/40(2)/L.2/Add5.

UNIDO has also been mobilizing Western entrepreneurs for the creation of joint ventures with Russian companies. In order to achieve this goal, UNIDO organized an international „Investment Promotion Forum“ in St. Petersburg and Novgorod in September 1994. Finally, UNIDO is compiling lists of investment projects in Russia, one of which was presented during an UNIDO investment forum called „Business cooperation in Russia through investment“ held in Vienna, 28-30 June 1994.

The annual reports of UNIDO give a brief overview of the organization's activities.

A contact person for UNIDO in New York is:

Ms. Aurora Rodriguez
Liaison Office UNIDO in New York
DC 1-1116
New York, NY 10017 USA
Telephone: (212) 963-6882

In Vienna:

Mr. Paul Wiedemann
Acting Head European Branch - Military Conversion
UNIDO -Rm. D-2042
Vienna International Center
Vienna, Austria

Publications of UNIDO

United Nations Industrial Development Organization. 1993. *Memorandum on the conversion of the Kirovsky plant in St. Petersburg*. Vienna. (12 pages).

Pre-feasibility study on the project of converting a defense-oriented enterprise in St. Petersburg into a design and manufacturing facility for wheelchairs.

United Nations Industrial Development Organization. 1994. *Summary list of projects for an UNIDO investment forum, „Business Cooperation in Russia through Investment,“ covering the republics of Komi, Bashkortostan, Tatarstan, Kalmykia, and the regions of Perm, Saratov and Volgograd, held in Vienna, June 28-30 1994*. Vienna.

2.3.5. The United Nations Development Program (UNDP)

The principal approach of UNDP to conversion is to provide consulting and assistance services upon request, with the institution working primarily as a clearing-house to bring parties together

and aid in the realization of projects.¹¹ An internal UNDP working paper dated 1992 defines the main conversion goal of the institution as ensuring that the conversion of military capacities in Eastern Europe would contribute to the economic development of the countries involved. „In order to do so, the conversion efforts required should focus on 1) reform of government administration of central planning and executive branches, creative legislation and reformulation of national objectives; 2) privatization—private sector as the most logical carrier of the conversion effort; 3) establishment of a full systematic conversion plan for countries to consider based on (a) economic and technological assessment of the country's preparedness for conversion; (b) sectoral and subsectoral probe, etc.“¹²

The United Nations Development Program (UNDP) has dedicated one chapter of its annual *Human Development Report* to the peace dividend and its possible use for development. A couple of the working papers written in preparation of this report have been published separately as *Occasional Papers*, one of which focuses on the subject of the peace dividend.

The UNDP contact person for the *Human Development Report* is:

Ms. Ingeborg Kaul
Director, Human Development Report
UNDP
DC 1-2094
New York, NY 10017 USA
Telephone: (212) 964-5064

Publications of UNDP

United Nations Development Program. 1994. „Capturing the Peace Dividend.“ *Human Development Report 1994*. Oxford: UNDP, pp. 47–60.
Report assessing the issue of the peace dividend.

Wulf, Herbert. 1993. *Disarmament as a Chance for Human Development: Is there a Peace Dividend?* Human Development Report Office, Occasional Paper No. 5. New York: UNDP. (64 pages).
Report assessing the different aspects of the peace dividend.

¹¹ For instance, in 1992 UNDP assisted in a project for Ethiopia which focused on the economic re-integration of demobilized soldiers.

¹² Taken from a summary record (a copy of which is in the author's archives) of the second session of the interdepartmental task force on conversion from 16 July 1992 (page 3), where the working paper was presented. A copy of the working paper itself could not be obtained.

2.3.6. The International Labor Organization (ILO)

In 1981, the International Labor Organization (ILO) based in Geneva obtained a mandate from the International Labor Conference to undertake research on the characteristics of employees in the national defense industries of Member States. The main focus was on the possible impacts of disarmament on that group.

In 1984, the ILO office implemented the so-called Disarmament and Employment Program, in the context of which a number of studies, articles and other works have been published. The articles were published in the ILO journal, the *International Labor Review*, while the studies were released as *Working Papers*.

A summary of the ILO's activities related to conversion, given in the written version of a speech at an international conversion conference in Bratislava in 1992, has not yet been available. In that year, the ILO commissioned two studies to deal with the impact of the disarmament process on the military-industrial complexes in the United States and in Russia. These studies were scheduled for publication in 1993; however, they are not yet available through the ILO office in New York. Requests for copies of these documents in Geneva were pending at the time this report went to print.

Publications of ILO

Articles

Ball, Nicole. 1985. *Converting Military Facilities: Shared Responsibilities and the Need for Planning*. ILO Disarmament and Employment Program, Working Paper No.1. Geneva: ILO. (1122 pages).

Research paper published as part of the ILO World Employment Program. Within the context of this program, ILO concentrated on issues relating defense expenditures to employment, thus examining the employment consequences of cuts in such expenditures. One major issue which arose was that of the conversion of defense-related industries and plants as well as military facilities to non-military use. Ball's study reviews the experience with such conversion, paying particular attention to the role that central, regional and local governments can play in facilitating the process.

Ball, Nicole. 1986. „Converting the Workforce: Defense Industry Conversion in the Industrialized Countries.“ *International Labor Review*. Vol.125 No.4, pp. 401–422.

Article analyzing the situation of the industries and occupations in the industrialized countries that are most dependent on defense contracting. Discusses the specific problems certain groups of workers encounter in transitioning to the civil sector.

Battistelli, Fabrizio and Liba E.A. Paukert. 1988. *Regional and Occupational Dependence on Defense Contracting in the Rome Area*. ILO Disarmament and Employment Program, Working Paper No. 9. Geneva: ILO.

Report analyzing defense employment in the Rome area. The first part portrays the defense industry in Italy, including recent output, employment trends and geographical distribution, then analyzes the dependency of the Rome area on the armaments industry and defense contracting. The second part examines the employment characteristics of five defense-industrial companies, selected so as to form a fairly representative sample of the area's defense industry. The third part illustrates recent employment and unemployment trends in the area, compared to those in Italy as a whole. The fourth part consists of a description of six interviews conducted with representatives of the defense industry in the Rome area, exemplifying company managers' reactions to reductions in arms spending and defense procurement.

Bernard, Adam. 1989. *L'Industrie d'Armements en Belgique: Difficultés, Crise et Tentatives de Diversification*. ILO Disarmament and Employment Program, Working Paper No.13. Geneva: ILO.

Bischak, Gregory and Michael Oden. 1989. *The INF Treaty and the United States' Experience: The Industrial, Economic and Employment Impacts*. ILO Disarmament and Employment Program, Working Paper No.11. Geneva: ILO. (also published as a chapter in Paukert and Richards, 1991, 123–156).

The Conversion of Manpower Employed in the Armaments Industry and Related Activities: Report on the Replies to an ILO Questionnaire Gathering Information on Disarmament and Employment. [1987]. ILO Disarmament and Employment Program, Working Paper No.6. Geneva: ILO. (38 pages).

Working paper summarizing replies to a questionnaire sent to all ILO Member States in October 1984. The questionnaire asked for information on disarmament and employment under four main headings: (1) military expenditure and employment creation, (2) employment and manpower structure of the armaments industry and related services, (3) personnel engaged in military research and development, and (4) conversion of manpower from military to civilian use.

Cooper, Julian. 1988. *The Soviet Defense Industry and Conversion: The Regional Dimension*. ILO Disarmament and Employment Program, Working Paper No.10. Geneva: ILO. (also published as a chapter in Paukert and Richards, 1991, 157–178).

Dunne, J.P. 1986. *The Employment Consequences of Military Expenditure: A Comparative Assessment*. ILO Disarmament and Employment Program, Working Paper No.5. Geneva: ILO.

Paper evaluating and comparatively assessing studies of one of the most easily measured and important economic affects—the employment consequences of military expenditure.

„Effects of Disarmament on Employment in the USSR.“ [1986]. *International Labor Review*. Vol.124, pp. 423–434.

Engelhardt, Klaus. 1985. „Conversion of Military Research and Development: Realism or Wishful Thinking?“ *International Labor Review*. Vol.124 No.2, pp. 181–192.

Article discussing the different possibilities for limiting dislocation and retraining in converting military research and development infrastructure.

Fontanel, Jacques. 1989. *L'Industrie Chimique de la France, le Disarmement et la Conversion de la Production des Armes*. ILO Disarmament and Employment Program, Working Paper No.15. Geneva: ILO.

Gohrband, Christopher A. and Jeanne P. Gordus. 1988. *Defense Manufacturing Employment in Michigan: Possible Effects of Cuts in Procurements*. ILO Disarmament and Employment Program, Working Paper No.8. Geneva: ILO.

Presents some original estimates of the defense-manufacturing workforce in Michigan, analyzing it by occupational categories. Assesses the difficulties different groups of workers would have in the event of defense production cuts. Demonstrates the results of a small, specially designed survey of managers in the defense industry, showing their reactions to possible procurement cuts. Finally, offers a description and analysis of unemployment and other social benefits which would accrue to defense-industrial workers laid-off as a consequence of such cuts.

International Labor Organization. 1992. *Employment Consequences of Disarmament: ILO Contribution to the Defense Conversion Debate, a paper presented at the Conference on the Conversion of Military Production: A Comparative Approach, organized by the Institute of Economics of the Slovak Academy of Sciences, Bratislava, 16-18 November 1992*. Geneva.

Khromov, G.K. 1990. *Problems of Conversion from Military to Civilian Production Following the Soviet-United States Treaty on the Elimination of Intermediate Range and Shorter Range Nuclear Forces: Example of the Votkinsk Plant: Part I*. ILO Disarmament and Employment Program, Working Paper No.16. Geneva: ILO. (also published under the title „Conversion from Military to Civilian Production: The Votkinsk Plant,“ as a chapter in Paukert and Richards, 1991, 179–188).

Lin, C.Z. 1989. *Employment Implications of Defense Cutbacks in China*. ILO Disarmament and Employment Program, Working Paper No.14. Geneva: ILO. (also published as a chapter in Paukert and Richards, 1991, 189–204).

Paukert, Liba and Peter Richards, ed. 1991. *Defense Expenditure, Industrial Conversion and Local Employment*. Geneva: ILO. (228 pages).

Collection incorporating a number of ILO research papers prepared as part of the Disarmament and Employment Research Program begun in 1984. Since ILO's field of competence clearly relates to issues of labor policy and employment, the studies deal with the characteristics of the workforce associated with defense spending and certain characteristics of the enterprises in which they worked. Includes the following chapters: „Quantifying the relation of defense expenditure to employment,“ by J.P. Dunne; „Defense employment and the local labor market of Greater London,“ by Sue Willett; „The regional and occupational dependence on defense contracting in the Greater Munich area,“ by Burkhardt J. Huck; „Regional and occupational dependence on defense contracting in the Rome area,“ by Fabrizio Battistelli; „Defense manufacturing employment in Michigan: possible effects of cuts in procurement,“ by Christopher A. Gohrband and Jeanne P. Gordus; „The INF Treaty and the United States experience: the industrial, economic and employment impact,“ by Gregory Bischak and Michael Oden; „The Soviet defense industry and conversion: the regional dimension,“ by Julian Cooper; „Conversion from military to civilian production: the Votkinsk plant,“ by G.K. Khromov; „Employment implications of defense cutbacks in China,“ by C.Z. Lin; and „Employment impact of industrial conversion: a comparative analysis,“ by the editors.

Paukert, Liba and Peter Richards. 1990. *Employment Impact of Defense Industrial Conversion: A Comparative Analysis*. ILO Disarmament and Employment Program, Working Paper No.17. Geneva: ILO. (also published as a chapter in Paukert and Richards, 1991, 205–227).

Reppy, Judith. 1986. *Labor Use and Productivity in Military and Non-Military Related Industry*. ILO Disarmament and Employment Program, Working Paper No.2. Geneva: ILO. (48 pages).

Essay surveying the available evidence on occupational skills and productivity in the defense industry of the United States and other industrialized nations.

Richards, Peter. 1991. „Of Arms and the Man: Possible Employment Consequences of Disarmament.“ *International Labor Review*. Vol.130 No.3, pp. 275–290.

Article outlining how arms reductions around the world will adversely affect a high number of workers, and drawing conclusions about the speed of transition assistance for such displaced workers.

- Royer, Jacques. 1986. *The Long-Term Employment Impact of Disarmament Policies*. ILO Disarmament and Employment Program, Working Paper No.3. Geneva: ILO.
- Royer, Jacques. 1986. „The Long-Term Impact of Disarmament Policies: Some Findings from an Econometric Model.“ *International Labor Review*. Vol.125 No.3, pp. 279–304.
Article examining possible linkages between disarmament and development policies, as well as their impact on employment.
- Sabolo, Yves. 1983. „Disarmament and Employment: Background for a Research Program.“ *International Labor Review*. Vol.122 No.3, pp. 263–278.
Article documenting the importance of the armaments industries in the world economy, with a focus on the direct and indirect employment implications.
- Samorodov, A. 1990. „Conversion of the Soviet Defense Industry and its Consequences for Labor.“ *International Labor Review*. Vol.129 No.5, pp. 555–572.
Article suggesting that the conditions for industry conversion in the Soviet Union are favorable, although significant obstacles lie ahead. Some of these obstacles include: the talent drain to the private sector; the improbability of full re-employment; and the difficulties in transferring financing mechanisms to a competitive system.
- Thee, Marek. 1983. „Swords into Ploughshares: The Quest for Peace and Human Development.“ *International Labor Review*. Vol.122 No.5, pp. 535–548.
Article considering the economic opportunities of conversion, with a special concentration on workers and trade unions. It also focuses on the specific problems of Western Europe.
- Voss, Werner. 1989. *Reductions in Armaments Production: Lessons to be Drawn from Adjustment to Structural Change in the Shipbuilding Industry in the Federal Republic of Germany*. ILO Disarmament and Employment Program, Working Paper No.12. Geneva: ILO.
- Wilke, P. and H. Wulf. 1986. *Manpower Conversion in Defense-Related Industry*. ILO Disarmament and Employment Program, Working Paper No.4. Geneva: ILO. (52 pages).
Study addressing the extent of potential manpower conversion problems, their ability to be anticipated and the general steps that could be taken to ease transition problems. The authors further assess: (1) what kind of training—or retraining—would likely to be required for the workforce under question; (2) the particularity of job qualifications in arms production industries; (3) which occupational skills used in arms production would be transferable to alternative production; and (4) in which occupational categories serious difficulties of transferability would likely to be expected. In addition, the report demonstrates the experiences gained from retraining in crisis-prone industrial branches faced with massive lay-offs and assesses whether these experiences are applicable to conversion planning. Finally, the authors focus on the question of what national legislation has been proposed to tackle the problem of manpower conversion.
- Willett, Susan. 1988. *The Regional and Occupational Dependence on Defense Contracting in the Greater London Area*. ILO Disarmament and Employment Program, Working Paper No.7. Geneva: ILO. (56 pages).
Study examining defense-industrial employment in the Greater London area. The first part analyzes the dependency of the Greater London area on the armaments industry and on defense contracting, identifying the major defense contracting companies in the area as well as some of the leading subcontracting firms. Points out that the major defense contractors are usually the main employers in their localities. The second part consists of six case studies of large defense-industrial companies, selected so as to reflect the composition of the defense sector in Greater London. The analysis concentrates on the occupational and skill profiles of the workforce in the chosen firms. The third part demonstrates recent employment trends and the employment structure in the Greater London region as a whole. The fourth part of the study illustrates recent trends in British defense expenditure and examines enterprise and trade union reactions to changes in defense demand.

2.3.7. The United Nations Educational, Scientific and Cultural Organization (UNESCO)

The United Nations Educational, Scientific and Cultural Organization (UNESCO) in Paris commissioned a study dealing with conversion with the provisional title, „The Management of Science and Economy in Transition Economies“ as part of its Science, Technology and Society Program.¹³ However, the UNESCO office in New York could not provide any information about the eventual publication of that study. A request for further information from Paris was still pending at the time this report went to print.

The primary approach of UNESCO to conversion is the provision of input to relevant international conferences and workshops. UNESCO contributed to the international conversion conference in Dortmund, organized an international conference on the „Organizational Structure of Science in Europe“ in 1992 and arranged a number of workshops dealing with the ‘brain drain,’ especially in Russia. If these activities resulted in any publications, however, it was unable to be ascertained.

In 1993, UNESCO began negotiations with the University of Dortmund in Germany in order to establish economic training courses for Russian economists in the military-industrial complex. Finally, negotiations are underway with Yale University and the Massachusetts Institute of Technology (both in the United States), toward cooperation for the purpose of using Russian satellites for an international scientific data-transmission network.

¹³ „The study points out the need for a broader basis (versus sectoral) for conversion analysis. The role of universities in the development of a civilian research basis in the transition economies is emphasized . . .“; report of the UNCTAD Secretariat (TD/B/39(2)/20), p. 9.