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OLD AND NEW FACES

Between the Breukelen (1980) and Banff (1981) Conferences we will have had seven workshops and symposia, three of which were reported in our January issue of the Newsletter. We cover in this issue two meetings held in April, one on Chemical Warfare and the other on Confidence-Building Measures, leaving the remaining two to be held in late May for the next Newsletter.

Seven meetings between Conferences in one calendar year is something of a record for Pugwash, but perhaps not a record to be vied for since such a programme stretches our resources to their very limits - and beyond. Our elasticity is, however, finite if only because of the time constraints of old-hand Pugwashites upon whom we have had to depend for continuity of our efforts on various subjects.

And here is one of the rubs. We need a judicious mixture of old and new faces at our meetings to leaven Pugwash experience and knowledge with new ideas and fresh approaches. A nice thought, if and when it works. We have indeed been trying to infuse new blood in our meetings and as usual with blood transfusions the patient seems to look and feel better.

Certainly that was the case with the eighth Pugwash Workshop on Chemical Warfare (CW) held in Geneva from 2 - 4 April (p.106). Official discussions in the Committee on Disarmament served by the UN have become boring and repetitive but necessary affairs. Pugwash, despite slow progress, has kept going in the CW field mainly because the principal actors have asked us to do so in order that new possibilities with respect to on-site verification, the principal obstacle to a treaty, could be explored without the constraints of official negotiations. This we were again able to do and, as the report agreed to by the Group shows, we were able to advance beyond the frontiers of what officialdom has permitted. But perhaps more importantly, we saw the return to Pugwash meetings for the first time since 1960 of our Chinese colleagues, two of whom attended the Workshop from the Ministry of Defence, Beijing. Let us hope that this particular blood transfusion has a lasting effect. You will also note that in the list of participants there were many military and other establishment officials. They seemed to enjoy the free and relaxed exchange of different and often opposing viewpoints that characterize our meetings. If nothing else, the resulting gain of mutual confidence and respect was worthwhile.

The 37th Pugwash Symposium 'Confidence-Building Measures', Hamburg, 9-11 April, also experienced a relatively large number of new faces mingling with the 'regulars' (p.112). The location and setting for the Symposium were ideal - the Elsa-Brändström-Haus on the outskirts of Hamburg, which is an estate self-contained with respect to food and sleeping quarters overlooking the Elbe river. Graf von Baudissin and his able assistants led by Volker Böge, who had responsibility for the secretariat, provided a genial and perfectly organized meeting. The papers were of high quality, which will be published in a monograph, and provided excellent bases for the vigorous discussions which ensued. The new faces more than held their own with the veterans. It is with great anticipation and hope that we can look forward to many newcomers who will attend our annual Conference in Banff.

For the future generation of Pugwashites our eyes will be on the Canadian Student Pugwash Conference, with Fraser Homer-Dixon as a convenor, to be held in Ottawa 12-14 June, and the Second International Student Pugwash Conference at Yale University, 15-21 June; the first was held at University of California at San Diego in 1979, with Jeff Leifer and Greg Cross as the prime movers in both meetings. The three students mentioned above were all actively involved in our Breukelen Conference last year. May they be more successful than we in securing a peaceful and just world.

M.M. Kaplan

EIGHTH PUGWASH WORKSHOP ON CHEMICAL WARFARE (CW)

Geneva, 2-4 April 1981

Agenda

1. Review of recent developments related to a CW convention
2. Reports on past CW agent destructions, and other destruction and conversion problems
3. Technical analyses of conditions forming possible bases for demands for on-site inspections
 - a. Relations between nationally provided and internationally distributed information serving confidence building purposes, and the status of national evaluation based on such information
 - b. Possible technical measures to be undertaken:
 - (i) by a consultative committee in order to assist countries without means of their own to evaluate information
 - (ii) by a consultative committee
 - when on-site inspection is admitted
 - when on-site inspection is not admitted
 - (iii) possible levels of technical information necessary to be given by a party in order to turn down a challenge for on-site inspection

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REPORT

The eighth in a series of Pugwash Workshops on Chemical Warfare was held in Geneva from 2-4 April 1981. It was attended by 27 participants from 19 countries, including observers from the International Red Cross and the United Nations. Participants attended in their personal and unofficial capacity in order to promote free discussion.

Developments since the seventh Pugwash Workshop in Stockholm in June 1979 were reviewed. Topics covered included the bilateral US-Soviet talks, the discussions within the Committee on Disarmament, and factors which have caused increasing concern with respect to the lack of progress in negotiations towards the achievement of a treaty banning the production, development and stockpiling of chemical weapons. Of particular concern was the decision in the USA to proceed with the construction of production facilities for binary nerve-gas weapons. The Workshop reaffirmed its belief that the scope of the future Chemical Weapons Convention should be comprehensive, embracing all toxic substances whatever their origin or method of production, excepting only those intended for specified permitted purposes of such types and in such quantities as are appropriate to those purposes.

Special attention was paid to the crucial block on the problem of verification of adherence to a treaty, with a particular focus on some of the technical problems involved in verification-by-challenge procedures. Three types of verification activity were discussed: verification of the destruction of stockpiles, verification of non-production, and procedures for dealing with allegations of use, all of which may require at one stage or another the implementation of on-site inspection. The Workshop agreed that such on-site inspection is necessary, but must involve the minimum intrusion into the territory of a signatory State consistent with adequate verification. These are complex issues involving balance of risk and benefit, degree of confidence, the national and international mechanisms which would be involved, and status of implementation.

The discussion of the technical grounds for making challenges for on-site verification (and, implicitly, those also for denials of such challenges) identified particular technical problems that have to be dealt with further. These relate to methods of sampling evidence, and to presentation, dissemination and evaluation of technical findings; the influence of passing time must also be considered carefully. Technical methods might also include the gathering and dissemination of statistical information.

It was felt that verification of destruction of stockpiles would best be accomplished by the on-site presence of international inspectors, with due regard paid to the security concerns of the countries in question, after declarations had been made by parties of total volume of stocks of different warfare agents. There was much discussion of the form which these declarations might take, and the level of detail they should contain. Provided parties also declared the schedules on which they planned to destroy their stocks, declarations subdivided into total volume of stocks of the three categories of 'supertoxic lethal chemicals, other lethal chemicals, and other harmful chemicals' should suffice. If international on-site inspection is conducted on a continuing basis, more detailed declarations may not be needed at the initial state as further information would automatically be developed in the course of the destruction process itself. The destruction of existing stocks would take at least ten years to accomplish, on currently available technology, though it was possible that technology now under development could reduce that time.

Complaints of use of chemical weapons have caused great disturbance in mutual confidence, and attention was given to questions which now concern the UN Group of Experts to Investigate Reports on the Alleged Use of Chemical Weapons called for under

General Assembly resolution 35/144 C.

As regards complaints, the Workshop considered that at least three stages would be required in the handling of future allegations. The first would be private consultations between contending parties in order to answer questions that may have been raised. If this failed, recourse would be made to a group of appropriate experts which would be constituted on a permanent basis with provision for the inclusion of ad hoc consultants depending upon the particular incident involved. This group would then render an opinion on whether an on-site inspection might reasonably be expected to clarify the situation. Obviously, if on-site investigations are to be carried out, they should be conducted at the earliest possible time. Such a procedure might also serve for dealing with complaints that might arise in connection with other prohibited activities with respect to chemical warfare.

It was further noted that the many minor events which will undoubtedly arise could result in a needless waste of resources and good will, and that only allegations of significant magnitude should be taken into account.

WORKING PAPERS

- | | |
|---------------------|--|
| Kh. Lohs. | Some thoughts on the current situation in chemical weapons disarmament. |
| S.J. Lundin. | Verification by challenge - a useful concept for a chemical weapons convention? |
| J.P. Perry Robinson | The projected chemical weapons convention: a review of recent salient events, with comments on the use of on-site inspections and a consultative committee for verification. |

NB: Requests for the full texts of the above working papers should be sent directly to the authors. Because of space limitations, we reproduce below only one part of the comprehensive background paper prepared by Julian Perry Robinson for the 8th Workshop on CW. His complete paper also covers developments in CW negotiations since the 7th Pugwash Workshop held in June 1979, and problems of demilitarization of chemical material.

ON-SITE INSPECTION AND THE PROJECTED CONSULTATIVE COMMITTEE

(Excerpt from the working paper of J. Perry Robinson)

On the degree to which on-site inspection should contribute to verification, and on the nature of the international control organ that the projected CW convention might establish, the spread of declared opinion among states is wide and individual opinions appear to be strongly held. As we well know, these matters lie at the very heart of the CW negotiations, so much so that only when significant movement towards consensus on them begins will a CW convention really come into sight. In that the USA and the USSR are the prime possessors of chemical weapons, mutual accommodation on international controls and on-site inspection between the two superpowers is therefore of paramount importance. Regional agreements on these issues among other states might perhaps be

reached more easily and rapidly; but in the short term, if not necessarily in the long term, they would be of less value than superpower agreement. It may be useful here, then, to review the present state of agreement and disagreement reflected in the public releases from the bilateral negotiations, paying special attention also to the views of France, which seems to be the only other major military power to possess its own stocks of chemical weapons, as well as the views of the two Germanies, which are current repositories of superpower chemical weapons.

Current state of negotiations

Noted earlier in this paper are the main features of superpower attitudes towards on-site inspection. Agreement has been registered on its use only in the optional challenge mode. Disagreement has been registered on its mandatory use for routine verification. The USSR apparently does not require the latter at all. The United States is requiring it - one may assume from the informal American response of July 1979 to the Dutch questionnaire - for three functions: verifying destruction of declared stock-piles; verifying elimination of declared production facilities for chemical weapons; and verifying nonproduction of chemicals that are primarily useful for chemical-weapons purposes - 'single-purpose agents', in the old parlance. With regard to this third function, however, the USA does not believe that routine inspection of civilian chemical production plants is necessary or desirable. It may now be correct, in view of the 1980 joint report, to suppose that the US requirement for systematic on-site verification of non-production of single-purpose agents is limited to whatever would be needed to ascertain that operations in declared production facilities for 'supertoxic lethal chemicals' (wording which appears to exclude supertoxic casualty agents of the incapacitating type), does not exceed that which is expressly permitted. Whether there are any lurking American requirements for on-site inspection in connection with other matters, such as nondiversion of dual-purpose agents, is not definitely known.

France, in its formal response of June 1980 to the Dutch questionnaire, has indicated that it requires regular on-site inspection for five types of verification task, including verification of 'nonproduction of toxic products for specific military purposes and single-purpose precursors', monitoring (civil) organophosphorus production facilities, and 'the control of licensed laboratory production for basic research and for defence research'.

These further French requirements, at least some of which are shared by certain other Western countries, would make on-site inspection into a very much more elaborate enterprise than that apparently conceived by the United States, involving many more possible targets for inspection and being likely to intrude much more deeply into legitimately private domains. Verification on the French pattern would also be costly financially, a consideration not without practical significance especially when put in foreign-exchange terms. The apparent readiness of the United States to limit its non-production on-site verification requirements in the manner described above hints rather strongly at Soviet movement towards something more than the optional challenge mode of on-site inspection: the accord registered in the 1980 joint report on both limiting and declaring permitted supertoxic production facilities makes little sense otherwise. Of course it must not be forgotten that the costs of accepting the focussing device whereby on-site inspection may be made into a more acceptable implement of verification - the prior declaration procedure - include a necessarily greater reliance on the good faith of states in becoming parties to the convention; which is yet another reason for emphasizing the possible contributions of confidence-building measures.

The context within which on-site inspection is evidently being treated in the bilaterals is that set in the May 1978 joint report: a shared belief 'that the fulfillment of the

obligations assumed under the future convention should be subject to the important requirement of adequate verification', and 'that arrangements for such verification should be based on a combination of national and international arrangements, including the creation of a Consultative Committee'. It seems a fair supposition that the future directions of bilateral agreement on on-site inspection - assuming, of course, that the bilaterals continue - will be closely inter-related with the emergent roles and functions of the Consultative Committee.

Clearly evident is a strong disinclination on the part of the superpowers to foster anything so grand as an International Control Agency for the purposes of the 'international arrangements'. A consultative committee of states-party having a permanent secretariat, perhaps with an international roster of experts at its disposal, seems to be the most they will contemplate. This is at least a major step beyond the paltry undertaking on 'consultation and cooperation....through appropriate international procedures within the framework of the United Nations and in accordance with its Charter' which, together with the Article VI complaints procedure involving the Security Council, is all that the BW Convention (and the 1971 draft CW convention tabled by the Socialist countries provides in the way of international verification - a provision which the Sverdlovsk anthrax affair has shown to be dangerously inadequate. Superpower thinking on the Consultative Committee is presumably rooted in experience of the bilateral Standing Consultative Committee established under SALT I - a body which is widely believed to have functioned satisfactorily, although not obviously an adequate model for a multilateral body. The American views on the composition and functions of the 'standing consultative body' set out in the 'Work Programme regarding Negotiations on Prohibition of Chemical Weapons' which the USA tabled in the CCD in 1972 are presumably also still relevant.

The 1979 joint report registered agreement that the creation of a preparatory consultative committee should begin upon signature of the projected CW convention so that the work of the Consultative Committee proper could start immediately the convention entered into force (which would facilitate 'pre-convention CBMs'). The Consultative Committee would be convened as appropriate by the depositary of the convention or upon the request of any state party; the permanent secretariat would attend to its affairs between meetings. Both the mandate of the secretariat and the full range of functions to be assigned to the Consultative Committee await bilateral agreement. As to the latter, the agreement in principle that has already been registered on specific tasks suggests that, as an international control organ, the Consultative Committee would in fact have much in common with the 'embryonic International Disarmament Organization' proposed in the CW context by the Netherlands in 1973 and with the 'International Verification Agency' proposed in the Japanese draft CW convention of 1974/75. These currently agreed tasks fall into three main categories: mediation of data-exchanges to facilitate verification or nondiversion of lethal chemicals or precursors to chemical-weapons purposes; transmission of challenges and requests for on-site investigations; and the performance of any such challenge investigations if so requested by a state party or by the UN Security Council. There would, however, be no obligation upon states-party to use the Consultative Committee for all or any of these three categories of task; they might also be performed on a bilateral basis. The 1979 joint report describes the data to be exchanged thus (their scope, however, remaining unagreed): 'certain data on supertoxic lethal chemicals produced, acquired, accumulated, and used for permitted purposes, as well as on important lethal chemicals and the most important precursors used for permitted purposes'. Compilation of lists of the chemicals concerned is envisaged. The 1980 joint report adds nothing.

In contrast to the draft CW convention tabled by Britain in 1976, no roles have yet been assigned to the Consultative Committee with regard to the declarations to be required of states after becoming parties to the convention or with regard to the periodic

exchanges of statements and notifications to be required as follow-up to the declarations. Five types of declaration by each state-party are envisaged thus far: on stocks of chemical weapons (within 30 days); on their means of production (within 30 days); on plans for destruction of declared stocks (timing still under negotiation); on plans for elimination of declared means of production (not later than one year prior to commencement of elimination); and on the site within which any permitted production of super-toxic lethal chemicals will occur.

France has taken the position that 'the establishment of an international body - for instance a Consultative Committee' is essential as a means for effecting adequate international on-site verification. It envisages the Committee as being 'open to all parties'; as including 'a permanent secretariat and a corps of inspectors responsible for verification'; and as having available the 'services of a specialized laboratory'. It is encouraging to observe that France, as a chemical-weapons-processing country, which could therefore become subject to rather more active on-site inspection than most other potential states-party, is apparently willing to accept the intrusions of so well-endowed an international body.

37th PUGWASH SYMPOSIUM, 'CONFIDENCE-BUILDING MEASURES'

Hamburg, FRG, 9-11 April, 1981

Agenda

1. Theory and concepts of CBM in the East and West
2. Non-military CBM, especially in the economic field
3. CBM within the framework of the UN and in different regions (for instance: Latin America, Middle East)
4. CBM and SALT
5. CBM in and for Europe (MBFR, CSCE/Madrid, European Conference on Disarmament)

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REPORT

The Symposium was held in plenary sessions and working groups. Invited papers (p.121) were presented in a plenary session by the respective authors, followed by a discussion. After all the papers were discussed, five working groups were formed to hold more detailed discussions on the topics listed below. Brief reports were drawn up by each of the discussion groups and were presented in plenary session where comments were made for possible inclusion by the working groups in their final reports which are reproduced below. The final reports can be said to represent a consensus and summary of views expressed at the Symposium, rather than a fully agreed and comprehensive account.

Working Group 1. 'Psychological aspects of CBMs'

The term 'confidence-building measures' (CBMs) presents difficulties. The terms 'confidence' and 'confidence-building' cover a wide range of often different meanings. One has first to answer the questions: 'whose confidence do we speak of?', and 'what should we have confidence in?'. The expressions 'confidence-dispelling' or 'confidence-lowering' might be preferable, although the term 'confidence-building measures' will surely remain in the international vocabulary. The task of confidence-building is urgent. The actual state of mistrust breeds mistrust and, therefore, there is a need for practical action.

One of the important groups of components in the texture of confidence-building consists of institutions that are not explicitly designed as CBMs, and which may be said to fall in between normal diplomatic channels on the one hand and ad hoc negotiations on the other. Two characteristics may be said to be typical for such institutions: they are fairly institutionalized or routinized, which may mean that consultations take place regularly; and that they are not particularly sensitive to political climates. They are also fairly limited in their scope, dealing with concrete issues concerning interpretation or implementation of treaties and agreements, rather than with making them. They would thus deal with concrete matters, rather than more general and abstract areas of possible agreement or disagreement.

Such institutions should be low-key. Their confidence-building virtue consists in giving the parties occasion for gauging each other's predictability and lines of thinking, thus providing each side with a number of experts that have solid experience in consultation bargaining with the other side. Since the consultations at the same time have some practical value and little symbolic importance, there is less risk for their being interrupted in times of high tension. Also their limited scope means that no great expectations are put on them, so that the risk for 'disillusionment' in case of temporary disagreements is limited.

The Standing Consultative Committee was mentioned as one such institution in the case of SALT. They can be found in many other areas dealing with, for example, the implementation of trade agreements, with handling common problems of communication and of pollution, e.g., in the Danube or the Baltic, with distributing radio wave-lengths, and so on.

It is desirable that these types of contact networks are strengthened and expanded in different directions: by being created for more areas of common problems and institutions; by meeting regularly, irrespective of what otherwise happens between the parties; and possibly also by some of them getting higher rank tantamount to some form of low-level but permanent summitry.

Trust versus mistrust between nations is an ongoing process which demands continuous assessment, monitoring, psychopolitical subtle interpretation, fostering interest in participation by the different nations, correct reading of signals, and continuous interdisciplinary international focus. The international psychopolitical climate needs to be diagnosed correctly in order to prevent deterioration. Because of the heterogeneity of national experience and acquired vulnerabilities, events and confidence-building measures create different perceptions amongst different nations, e.g., the US emphasis on having nuclear parity with the Soviet Union increases mistrust because of the past status of the US and the national image of needing to be No. 1.

It is felt desirable to create within Pugwash a standing interdisciplinary international commission which would constantly focus on the ongoing process of trust versus mistrust between nations. Such a group would assess through well-designed measures the sociopolitical and psychological indicators of the present international climate with

specific focus on arenas which destabilize it. They would match the presenting turmoil with past national vulnerabilities and prevent re-exacerbations of past hurts. They would interpret tactfully to the involved nations their own contributions to the present conflict. They would also decrease mistrust by a correct reading of signals. This would improve trust since nations would feel more secure because they would know what to anticipate. Anger at one's counterpart would decrease because of clarity of communication.

Because the present international climate is so filled with mutual mistrust, the group recommended a workshop as soon as possible to assess and heal the present US-USSR relationship in terms of trust versus mistrust. The workshop should aim towards developing an ongoing process of meetings and interactions. The participants of this workshop would form the nucleus for an international, interdisciplinary standing commission dedicated towards buttressing and building trust between nations.

However, with regard to the task of assessing and interpreting the state of international confidence, some scepticism was voiced as to the effectiveness of such a standing commission; it was felt that the matter should be further studied.

Working Group 2. 'Non-Military CBMs'

The Group focussed mainly on non-military CBMs of relevance to the East-West relationship, i.e., the kind of cooperative measures and undertakings included in the 2nd and 3rd 'baskets' of the final CSCE-declaration*, but also giving some consideration to the necessity or possibility of drawing developing countries into certain aspects of the confidence-building process.

Consideration was given to measures in:

1. scientific and technical fields;
2. the economic field, especially concerning the international flow of energy, development of new power technologies;
3. efforts to off-set or mitigate the consequences of natural disasters and similar catastrophes; and
4. exchange of information.

1. Scientific and Technical cooperation

Suitably structured cooperation in sufficiently large-scale and technological projects, such as: genetic engineering (e.g., the development of nitrogen-fixing cereal crops); development of fusion power technology; construction of accelerators for research in high energy physics; and collaboration in cybernetics and communication and information technology, would constitute significant non-military CBMs in the East-West relationship.

In some of these fields cooperation would surely be seen as entailing some strategic risk for the countries concerned, since it will force them to share technologies of real or imagined military importance. The overcoming of such hesitations is in itself a part of the confidence building effect. The same applies to the structures or mechanisms to be created in order to take care of the frictions which cooperative efforts inevitably will give rise to.

The 'Scientific Fora' approach envisaged in the CSCE process should be encouraged, although future 'Fora' should be re-orientated towards a more precise formulation of tasks in order to get the specific needs within specific fields considered by people with adequate knowledge of the problems and possibilities involved in cooperative efforts.

*CSCE = Conference on Security and Cooperation in Europe.

2. Flow of Energy and Development of New Power Technologies

Threats in the economic sphere which should call for CBMs can be seen partly as military threats to vital economic interests, and partly as threats carried out with economic means to military or other vital interests of the countries concerned.

The international flow of energy is clearly a field where fear is running high on both scores:

- a) The un-interrupted flow of energy is vital to the economies, and disruption of international flows (either intentionally or as a by-effect of international disturbances) remains at present a constant risk very much in the minds of governments and the public alike.
- b) Accordingly, the un-interrupted flow of energy is already used as a reason or a pretext for building up military postures around the main flow routes, and in the main oil-exporting areas of the world.
- c) Increased East-West interdependence and cooperation in this field is rapidly becoming a 'sensitive' strategic issue viewed with increased hesitation, e.g., the discussion on the projected pipeline between the USSR and FRG.

At the same time it is an area where much needed CBMs cannot take full effect without the participation of all the interest groups concerned, i.e., the industrialized nations of the East and of the West as well as the oil-exporting developing nations and the oil-importing developing nations.

To defuse the real or imagined threats involved, and to prevent what may be called a militarization of the issues, as well as to use it an opportunity to create a permanent structure of CBMs in this vital field, it should be explored whether a system could be institutionalized to monitor flows and market conditions, reviewing consumption patterns in member countries and devising agreements on restrictions and a sharing of accumulated reserves in case of emergency, preferably including all countries. Here again cooperation implies both real and imagined risks, which can only be eliminated with the build-up of confidence in the very dynamics of this unfolding cooperative effort.

Complementing this undertaking, renewed attention should urgently be given to the idea advanced by the Pugwash Conferences on several previous occasions of creating a World Energy Organization for the development of new energy technologies.

3. Natural disasters

The results in terms of human sufferings of natural disasters and similar catastrophies are becoming increasingly grave because of the increase in population and in urbanization.

At the same time, efforts to set off or mitigate these consequences are often far less intensive than they could be, because the facilities (helicopters, etc) are mostly of a military nature, and thus normally are not available in any great number for use in stricken areas outside militarily significant countries.

There would be scope in this field for a cooperative effort especially between the USA and the Soviet Union entailing ear-marking of military facilities to be used in rescue operations, possible joint training ventures in such operations, and staff cooperation in the planning and evaluation of stand-by mechanisms.

While worthwhile in itself, cooperation of this kind would be a valuable confidence-building opportunity for the military establishments of the various countries to get into contact with each other, as well as to see new roles for themselves outside their traditional functions.

4. Exchange of information

Various issues regarding informational and cultural CBMs were touched upon.

Ongoing efforts to create joint East-West projects of research on the history of the post World War 2 period should be encouraged.

Working Group 3. 'Confidence-Building Measures in Europe'

There was a general examination of the efforts currently being undertaken in the CSCE framework. Extensive attention was given to a critical assessment of military CBMs as laid down in the Helsinki Final Act. Also discussed were desirable extensions of existing CBMs, as well as possible new steps to be undertaken within and outside the CSCE framework.

The CBMs agreed upon in the Helsinki Final Act (so-called 'first-generation CBMs') must continue to be broadly applied, and deserve further consolidation and extension, in particular for:

1. increasing the information content of prior notification on military manoeuvres;
2. drafting a code of conduct for observer activities at military manoeuvres;
3. lowering the ceiling of troops participating in military manoeuvres which are subject to prior notification;
4. extending the period of notification in advance of the beginning of the manoeuvres;
5. making notification concerning troop movements with the same level of commitment as regards notification of military manoeuvres; and
6. exchanging annual training calendars.

The view was also expressed that it might be useful to invite more correspondents writing for military periodicals to attend manoeuvres and to increase the exchange of military personnel.

It was also felt that regularized meetings between officials of Foreign Ministries, e.g., on the level of heads of departments, might be a useful framework for consultations concerning implementation of CBMs, agendas of forthcoming follow-up meetings, and other aspects of European security and cooperation.

As far as the current debate on a Conference for Disarmament in Europe (CDE) is concerned, there was a consensus about the desirability of convening such a conference the first phase of which should deal with CBMs and the second with arms control measures. Some participants suggested CBMs concerning chemical weapons and nuclear forces, e.g., chemical and nuclear weapon-free zones in Europe extending from the Atlantic to the Urals.

It was also agreed that due consideration should be given to appropriate verification regarding any additional CBMs decided upon. Some members of the group expressed the need for legally binding measures, whereas other participants would prefer political commitments.

In the MBFR context, legally binding associated measures should be included as part of a reduction agreement. The view was expressed that it may be desirable to merge MBFR into CDE thus putting MBFR into a broader framework. The CBMs so far achieved or discussed would not be satisfactory without being followed by arms control measures.

Other CBMs discussed were:

1. subregional measures whereby two or three neighbouring countries, on a voluntary basis, would agree on a system of prior notification of military manoeuvres and troop movements more extensive than the ones applied between all CSCE countries;
2. a possible application of the CBMs developed within CSCE to nuclear weaponry;
3. creating a framework within which discussions aiming at the understanding of strategic doctrines may take place; and
4. the Mediterranean and the Baltic Sea as possible sites for implementing naval CBMs.

Working Group 4. 'CBMs and SALT'

The following measures were recommended to enhance confidence and trust in order to facilitate resumption of negotiations towards strategic arms limitation.

Since the Soviet Union has implied, and the Carter Administration declared, that they would not act contrary to the text of SALT II pending ratification, reaffirmation of this intention by the new American administration and by the Soviet Government would facilitate early resumption of the SALT process.

In order to reduce uncertainty and suspicion by lack of information, the recent trend towards more openness by the Soviet Union should be further developed – preferably with an annual posture statement detailing defence budgets, forces deployed and planned, and the doctrine on which Soviet forces are based. Both the United States and the Soviet Union should be encouraged to exchange information on weapons research and development.

Both the United States and the Soviet Union should avoid destabilizing military doctrines, missions and weapon systems.

- a. With respect to destabilizing missions, development of ballistic missile defence, antisubmarine warfare and antisatellite technologies should be stopped.
- b. With respect to destabilizing systems:
 - high accuracy land based ICBMs should be de-emphasized in favour of more seriously second strike retaliatory submarine based systems;
 - the NATO TNF modernization programme should be reassessed in view of the strategic threat posed by highly accurate Pershing missiles to Soviet command and control systems, and by cruise missiles to Soviet second strike submarine based forces based in the Kola peninsula;
 - both sides should renounce deployments of cruise missiles because they are relatively cheap, non-verifiable and will generate an expensive competition in both cruise missiles and defensive counter-measures.

Destabilizing new weapons systems could best be precluded by freezing the existing nuclear inventories with a moratorium on the production of nuclear warheads, and on the development and testing of new delivery vehicles.

In order to monitor the strategic balance a small non-governmental international strategic commission should be established. The commission should be staffed by experts from non-nuclear countries, and should report annually in the UN on developments in American and Soviet strategic systems and the status of SALT.

Direct linkage of SALT with international political developments in other fields

has proved harmful to the effort to limit strategic arms. Nevertheless, the opportunities and likelihood for successful negotiation would be greatly diminished, if not made impossible, in periods of increased tension and in a climate which creates additional suspicions and fears.

Experience shows that negotiations not only tend to encourage force-watching, but also tends to preclude the withdrawal of militarily obsolete forces by both negotiating parties. For example, Titan missiles and old B-52 bombers have been retained as SALT bargaining chips by the United States, and SS4 and SS5 missiles are being retained in the Soviet Union as bargain chips for the long-range TNF talks.

To insulate SALT from the pressures of linkage and bargaining, as much business as possible should be conducted in the standing consultative commission (SCC). For example, an agreement on anti-satellite weapons could be negotiated in the SCC as an implementing measure of the 1972 ABM treaty.

Working Group 5. 'The Role of Confidence-Building Measures in the United Nations Disarmament Debate'

The concept of CBMs in the United Nations pursues the aim of arriving, step by step, at a reduction of mistrust and fear in order to contribute to the development of confidence and better understanding between nations. It proceeds from the realization that States need to be reassured that certain activities of other States are no threat to their own security. Such a degree of confidence can, however, only be achieved if the amount of information available to governments enables them to foresee satisfactorily and to calculate actions and reactions of other governments within their political environment. Confidence-building measures should contribute to establishing a climate favourable for the conduct of negotiations and the conclusion of agreements on disarmament and arms control.

The situation in various regions of the world was evaluated by our group, and it was felt that conditions, although of a different nature, already exist which could be used for the development and introduction of CBMs taking into account the specific conditions and requirements of these regions. States should feel encouraged to initiate the application of specific measures in their respective regions. Latin America, where a framework and institutions have been established which serve to enhance communication, confidence and the settlement of disputes, could be used as a model for other regions of the world.

Regional conditions demand an open and flexible approach to the question of confidence-building. The relations between States are influenced and determined by many factors - military, political, social, economic and others. It is evident that a higher degree of openness is important. While it is obvious that in regions with a high concentration of armed forces and armaments, military measures which assure openness, predictability and consistency of political and military behaviour of States play a decisive role, in other regions, where the danger of armed conflict is less pronounced, other CBMs may be of equal significance. Such measures could help to create the climate and conditions conducive to the removal of inequalities in the political, social, and economic fields as underlying causes of tensions and conflict, thereby facilitating disarmament and arms control.

In this context it was generally recognized that concrete measures providing for openness, reliability and predictability in relations between States will contribute to the maintenance and strengthening of international peace and security, thus helping to ensure that the use and the threat of use of force are eliminated from international life, as has been provided for by the UN Charter.

Concluding Remarks by Klaus Gottstein

As speaker of the Pugwash Group of the Federal Republic of Germany, let me thank all of you who have participated in this meeting, and Count von Baudissin and his colleagues who have organized the Symposium in this beautiful setting.

What has this Symposium achieved? Let me just give you a few personal observations.

I think the Symposium has clarified what CBMs can and cannot be expected to do. In many political and public circles one hears that CBMs are an utopian concept if they are to be applied between partners who harbour a deep-seated distrust against each other, like the USSR and the USA, or India and Pakistan, or Israel and the Arab countries. It has been shown during the last two days that this opinion is based on a confusion of the terms trust and confidence. This confusion is enhanced in German by the translation 'Vertrauensbildende Massnahmen'. Confidence is not trust but something like sureness of expectation, absence of illusion. CBMs should contribute to establishing a climate in which negotiations can be conducted. Distrust and particularly mistrust, can only be removed by CBMs if the distrust or mistrust were unjustified because they were based on misconceptions. Let me give you some simple examples. If a small child loses its mother and the father remarries, it may take a long series of CBMs before the child loses its unjustified mistrust of the stepmother. Or if a nation changes its leadership, the new leadership may need many CBMs before certain parts of the population lose their mistrust, if indeed they ever lose it. In these examples the mistrust was assumed to be unjustified. But if the mistrust is obviously justified, as in a boxing game when you know that the other guy wants to beat you, then CBMs cannot remove mistrust. In this case CBMs can only remove the fear that foul play is intended. They cannot, however, remove the fear that the objective of the competitor is world championship, because that is what is indeed the goal of both sides.

The world of politics and armaments is, of course, more complicated than these examples. In this world we have a mixture of situations where mistrust is justified, and where mistrust is based on misunderstandings. Both mistrust and misunderstanding are psychological phenomena. Pugwash, because of its standing and trusted position both in the East and in the West, has a mission in both cases which it has served, with some success, over almost a quarter of a century. Pugwash has tried to build trust where mistrust was based on misunderstanding of each other's intentions, and it has worked for clarity of conditions, e.g., in the discussions leading to the ABM treaty, where mistrust seemed to be justified, at least for the time being. However, as far as I know, our present Symposium was unique in the history of Pugwash in that it gave so much attention to psychological components. We owe this important step to Dr. Rita Rogers. If this approach is followed up we may learn more about the preoccupations in the minds of the peoples and the leaders in the East and the West, their perceptions of threat under which they live, and about the vicious circle which turns these perceptions into real, deadly threats to mankind.

What are some of the specific points that should be conveyed again and again by all methods, including psychological ones, to the public and to decision-makers? I shall refer to only a few points, and I shall not try to distinguish between CBMs and arms control. During this Symposium it was repeatedly stressed that CBMs and arms control should not be mixed up. I agree with that. On the other hand, it was also made clear that CBMs must ultimately lead to arms control if they are to be worth their while. Let me quote from Jane Sharp's paper:

- ICBM modernization is most probably destabilizing, as Admiral Stansfield Turner recently pointed out. High accuracy ICBMs can be launched on short notice, have a short flight and can destroy hardened targets like ICBM silos. Therefore the USA and the USSR should forgo their ICBM modernization programmes. Both countries should concentrate on submarine based retaliatory systems. Preparations for anti-submarine and anti-satellite warfare are destabilizing too.
- The price of Soviet reticence on data and military doctrine is very high. Soviet strength was often overestimated because of secrecy, and this led to unnecessary armament efforts.
- An early warning system for destabilizing concepts is needed.

One of the papers contributed to this Symposium called attention to the different vocabularies used by the East and the West in CBM discussions. It is very important to learn each other's vocabulary in order to avoid misunderstanding. The term 'non-use of force', e.g., has very different meanings in Eastern and in Western dictionaries. We must realize that for the USSR the support of friendly liberation movements which use force against hostile liberation movements is always justified. Force is only forbidden against governments and movements friendly to the USSR. I say this without cynicism. This is just the Soviet doctrine which it is good to learn and in spite of which, or rather because of which, confidence-building measures have to be applied, i.e. measures creating clarity and removing misunderstandings. Of course, not only we in the West have to learn the Soviet doctrine, the Soviet Union also has to learn, and I am sure it already has learnt, the rules and concepts valid in the West. Pugwash has to do its part in mediating between the two camps, and in building confidence, i.e., clarity. Pugwash can do this because its members trust each other as persons and colleagues, and because its members often have good relations with their own governments. Pugwash must do this because it is a movement of scientists who know the effect of nuclear weapons and who know, therefore, that mankind is heading for disaster if arms control and disarmament does not succeed. Everything must be done, every CBM including carefully selected unilateral steps, is justified by the goal of avoiding the disaster.

LIST OF PAPERS

Karl E. Birnbaum	Confidence-building as an approach to cooperative arms regulations in Europe
Yair Evron	Confidence-building measures in the Sinai
E. Chossudovsky	Towards the elaboration of a comprehensive policy concept of CBMs in East-West interactions
Daniel Frei	A third-party role for the neutrals in the context of CBM verifications?
E.E. Galal	Overcoming obstacles to confidence-building measures in the Middle East
J. Goldblat & V. Millan	Regional confidence-building in the military field

M.M. Kaplan	Non-military confidence-building measures through international collaboration in science and technology
Leo A. Kaprio	Detente in Europe. WHO's role in international cooperation in Europe
Ch. Krause	Theory and conceptions of CBMs in East and West
Harald Lange	General remarks on CBMs
Erwin Moller	Non-military confidence-building measures
Gerhard Pfeiffer	The role of confidence-building measures in the United Nations disarmament debate
Rita R. Rogers	Confidence-building measures - a psychopolitical perspective
Kalevi Ruhala	Toward a theory of confidence-building measures
Jane M.O. Sharp	Confidence-building measures and SALT
A. de Smaele	Confidence-building measures: A new political deal?
H. Vetschera	Implications for the further development of CBMs
H. Wiberg	Building confidences in Europe

NB: Requests for working papers should be addressed directly to the authors. The revised papers will be published as a book in due course by Professor von Baudissin's Institute.

OBITUARIES

Academician Georgie Nadjakov of Bulgaria died on the 24 February 1981 at the age of 85. Professor Nadjakov was a distinguished physicist and Director of the Institute of Physics of the Bulgarian Academy of Sciences in Sofia. He was one of the oldest Pugwashites, having started with the 3rd conference in Kitzbuhel in 1958 and attended a total of seventeen Annual Pugwash Conferences until the 28th in Varna in 1978. He was also a very active member of the Bulgarian Pugwash Group.

Professor Yuri Vladimirovich Riznichenko of the USSR died on the 1 January 1981 at the age of 69. He was a geophysicist of great renown and his special field of study was seismology. He attended the 9th and 10th Pugwash Conferences, and was a member of the small group of scientists who gathered in March 1963 in a special Pugwash meeting to discuss the technical and political aspects of the nuclear test ban treaty.

Dr. Gertrud Weiss-Szilard of the USA died on the 27 April 1981 in California. Apart from her own untiring efforts in the cause of nuclear disarmament, Trude was well known as the editor of the works of her husband Leo Szilard, two volumes of which have already been published. She attended the 17th and 26th Pugwash Conferences.

Dr. K.J. Schmidt of the Federal Republic of Germany. Dr. Schmidt of the Bayer AG attended several of the Pugwash Workshops on Chemical Warfare in which he made important contributions with respect to problems of verification of non-production of chemical warfare agents.

A COMPREHENSIVE PROGRAMME OF DISARMAMENT

Editor's Note

A comprehensive programme of disarmament has been submitted to the Committee on Disarmament, serviced by the United Nations, by a group of prominent individuals including Lord Noel-Baker, Lord Brockway and Sean MacBride from the World Disarmament Campaign. Since this subject is central to the interests of Pugwash, the main parts of the documents are reproduced below. The complete paper contains an introduction which gives the background for the programme. The complete document can be obtained from the World Disarmament Campaign, 21 Little Russell Street, London WC1 4HF.

THE CASE FOR THE PROPOSALS

1. The arms race was not halted by the Special Session; on the contrary it has continued with increased momentum and the danger of a World War has correspondingly increased. The World Disarmament Campaign believes that this danger is so urgent that the process of disarmament should begin in 1982 and should be completed within a fixed and short period of years.
2. In his draft Treaty of General and Complete Disarmament, laid before the United Nations in 1962, President John Kennedy proposed that there should be 3 stages of 3 years each, with a possible extension of the last stage, if required - total period nine years, plus. (The third stage was to be 'completed within an agreed period of time as promptly as possible'.) Chairman Krushchev in his draft Treaty of the same year proposed three stages of 18 months, two years and one year: total four and a half years.
3. The Scientists of the Pugwash Movement in 1962 recommended that the whole process of disarmament should be completed in four years. This they said would be the most advantageous period from the economic point of view. In a special study, the Research Unit of the British 'Economist' endorsed the Pugwash view.

In January 1964 Mr. Harold Wilson proposed a compromise between the Kennedy and Krushchev plans: three stages of two years each: total period six years. This proposal received widespread popular support.
4. Both Kennedy and Krushchev proposed that all the reductions of armaments to be made in all three stages of their plans should be laid down in a single comprehensive world treaty, to be accepted by all States with significant military strength. They both thought it essential that Governments, General Staffs and Peoples should have clearly before them from the start the final objective for which the treaty was made, namely a fully disarmed and de-militarized world. This would give every nation permanent national security because, in President Roosevelt's words: 'no nation would have enough armaments to attack any neighbour anywhere'. (Speech on the Four Freedoms, 1940.)
5. To achieve this objective it was obviously essential that the Treaty should deal with all the factors of military strength which can be reduced and limited by the agreed common action of the Governments. These factors are three:
 - a) Trained Manpower i.e., officers and men with the Colours and in organized trained reserves.
 - b) Armament i.e., weapons and equipment of a military character, including transport and signals.

- c) Military Expenditure i.e., monies spent on the Armed Forces, on the procurement of weapons and equipment, on military research and development and on payments to the personnel of trained reserves.

With one important exception, the Krushev draft Treaty proposed that, in each stage of the disarmament process, these three factors of military strength should all be reduced and limited simultaneously and by the same amount.

6. The exception in Chairman Krushev's draft Treaty was the means of delivery nuclear weapons, i.e. missiles, aircraft, submarines, artillery capable of firing nuclear shells, etc. Chairman Krushev proposed that all these means of delivery should be abolished during Stage I of his draft Treaty, i.e., during the first 18 months of the disarmament process. By this means he hoped to eliminate the danger (much emphasized by the West) that a disloyal Government might keep a secret stock of nuclear weapons and so be able to blackmail the Governments that had loyally fulfilled their obligations. He argued that nuclear weapons are useless without the means to deliver them and that the manufacture of the means of delivery and the training of troops to use them could not be concealed from United Nations Inspectors. There would thus be no danger of cheating.

7. John Kennedy proposed that Manpower and Armament (weapons and equipment) should be reduced by 10% per annum during the first three year stage and by 50% of the remaining inventory during the second three year stage. Final reductions would be made during the last stage as required by the situation which then existed.

The World Disarmament Campaign respectfully suggests that the Committee on Disarmament should propose to the Second Special Session of the General Assembly devoted to Disarmament the following:

PROPOSALS

a) A single comprehensive World Treaty, which should include all the reductions and limitations of Manpower, Armament and Military Expenditure required to effect the General and Complete Disarmament of all nations.

b) The Treaty should provide that Disarmament shall be carried out in three stages of two years each.

c) The Manpower, Armament and Military Expenditure of each signatory State should be reduced by 15% per annum during each year of the first two stages and by 20 % per annum in Stage III, giving a reduction of 60% at the end of Stage II and 100% at the end of Stage III. (Please note that these percentages relate to the total Manpower, Armament and Military Expenditure to be re-directed, converted or re-allocated to peaceful purposes. They do not include Armaments, Manpower or Military Expenditures, required for purposes of internal order or as contributions to a United Nations Peace Force.)

The reduction and limitation of Manpower must establish an equitable balance of strength between States whose armed forces consist entirely of professional long term volunteers and States in which the large majority of forces consist of short term conscripts. This involves highly complex technical problems, which can be solved by the system worked out by the League of Nations Disarmament Conference of 1932-33. Likewise, highly complex technical problems arise in the reduction and limitation of national military budgets. These problems can be solved by reference to the expert reports prepared for the UN Secretary-General and by utilization and development of the reporting instrument on military expenditure that has recently been completed.

d) The Treaty should provide for the total abolition by all States of all military research and development, the closure or conversion to peaceful use of military research establishments and the prohibition of any budgetary appropriation for military research.

e) The Treaty should create a United Nations Disarmament Organization (UNDO) for the verification of the faithful observance by all signatory States of their obligations under the Treaty.

UNDO should be under the direction of an administrator who would be responsible to the United Nations Security Council. His reports should also be submitted to the United Nations General Assembly.

Verification in each signatory state should be by teams of qualified United Nations inspectors who should have:

- i) full diplomatic immunities and privileges
- ii) unimpeded access to all establishments and records, public and private
- iii) the right to question all citizens of the State to which they are accredited
- iv) their own independent means of communicating with the administrator.

f) The Treaty should lay on every signatory State the duty to impose on all their citizens as an individual and collective obligation to inform the United Nations Inspectors of any actual or suspected violation of the Disarmament Treaty by their Government.

g) The Treaty should recognise the right of every signatory State to use one quarter (25%) of the money saved by the reduction and limitation of its armaments for investment in public works or reduction of its national taxation. Signatory States should undertake to pledge the remaining three quarters (75%) of their savings to development aid. At least half of the development funds thus generated should be administered either through the World Bank (IBRD) or through one of the United Nations Agencies, so that national aid programmes would administer, at most, one half of the savings.

Nationally or internationally administered, it would be understood that this money would be used for productive projects to end world illiteracy, poverty, hunger and preventable disease and to establish a new international economic order.

ISODARCO 1980

The 8th Course of the International School on Disarmament and Research on Conflicts, ISODARCO, organized by the Italian Pugwash Group, was held in Venice, Italy from August 26 - September 5, 1980. There was a total of 62 participants of whom 24 were lecturers, and in addition 7 observers. Twenty-six countries were represented.

The first part of the course was devoted to the topic, 'Disarmament and Arms Control - Present Situation and Future Prospects'. This was discussed under the headings of international security, nuclear proliferation, political and military detente, potential destabilization resulting from radically new weapons systems, technological information and mis-information, SALT and arms control prospects, confidence-building measures and the position of the Third World in relation to arms control and non-proliferation. The second and shorter part of the course was devoted to 'Regional Security and Cooperation in the Balkans and Eastern Mediterranean'. This was discussed from the standpoint of problems of the region, regional integration, military balance and naval factors, the case of Turkey, external military influence, and economic cooperation. A summary of the discussions can be obtained from Professor W.F. Gutteridge, Political & Economic Studies Group, University of Aston, Birmingham, England.

RECENT PUGWASH PUBLICATIONS

Appropriate Technology and Social Values. A Critical Appraisal. Papers from the 32nd Pugwash Symposium, Racine, Wisconsin, June 1978. Franklin A. Long and Alexandra Oleson, Eds. Ballinger (Harper and Row), Cambridge, Mass., 1980. 216 pp. \$19.50. The following excerpt is from a review by Professor Richard S. Rosenbloom of Harvard University, published in Science, Vol. 212, No. 4490, p. 38, 3 April 1981.

"This interesting book makes available to a wider audience the papers prepared for an international symposium on these issues. A distinguished group of social scientists and public servants discusses the conceptual, philosophical, and practical issues wrapped up in these debates. The papers are thoughtful, informative, and readable.... The papers in part 1, together with Franklin Long's concise and useful introduction, could stand by themselves as valuable reading for anyone interested in the subtle and complex interactions of technology and society. Part 2, Appropriate Technology in Practice, is principally a review of experience in parts of the developing world.... In sum, this book offers a coherent and dispassionate review of issues of central concern. While the energy and creativity of the more impassioned advocates will surely continue to provide the driving force in the necessary discourse on technology and values, the sober voice of academic appraisal provides the necessary counterpoint. Long and Oleson have provided a base-line against which future developments of the themes of appropriate technology can sensibly be appraised."

Scientific Cooperation for Development. A Search for New Directions. P.J. Lavakare, Ashok Parthasarathi and B.M. Udgaonkar, Eds. Vikas Publishing House Ltd. 5 Ansari Road, New Delhi, 210 pp 1980. Rs 50, \$18 (US), or £7. UK, distributors Croom-Helm Ltd, 2-10 St. Johns Road, London SW 11. USA distributors Advent Books Inc., 141 East 44th St., Suite 809, New York 10017.

This book was published under the aegis of the Indian Pugwash Society, and comprises a heterogeneous collection of papers dating back to 1967. They were written for different purposes at various times, mainly in the seventies, by well-known authorities including Roger Revelle, Geoffrey Oldham, Bhal Udgaonkar, Y. Nayudamma and Essam Galal. There is also an excerpt from Prime Minister Indira Gandhi's speech at our Madras Conference in 1976. Included as well are accounts of Pugwash meetings and contributions in preparation for the United Nations Conference on Science and Technology for Development (UNCSTD) held in Vienna in August 1979, notably the Pugwash Guidelines for International Scientific Cooperation for Development which have received wide notice.

The book was completed immediately after the acknowledged failure of UNCSTD to meet the hopes of many scientists and others deeply concerned over the plight of poor countries, and certainly the expectations of the less developed countries (LDCs) themselves. The sense of bitter disappointment and anger of the LDCs pervades the editorial comments. Many of the articles berate (with considerable justification) the unfair practices of the 'North' in dealing with problems of the economically poor countries, while having relatively little to say of any benefits gained whatsoever.

Such a selection of articles is understandable because of the deep suspicion in the 'South' of many actions taken by the 'North' supposedly for the benefit of developing countries, but which often have a large component of self-interest. Unfortunately, however, such deep suspicion can be counter-productive. One example is that of the World Health Organization (WHO) having to terminate in 1975 its laboriously developed

research efforts on mosquito control in India, because of the allegation that WHO was acting as a tool for foreign intelligence services to study secretly the possibilities of introducing biological warfare, e.g., yellow fever, into India. This was an absurd accusation, effectively refuted by a WHO 'white paper' on the subject. But the harm had been done. Termination of WHO's activities was a highly damaging set-back to research on the genetics and ecology of mosquitoes, vital to progress for the control of malaria, and where lost ground has still not been regained. Malaria, after initial successes for its control in the late sixties and early seventies, has now returned as one of the most devastating diseases of the tropical countries.

While the collection of papers is uneven in content and approach, the book provides a useful and interesting compilation of sharply focussed thinking on some major political, educational, and socio-economic problems concerning the transfer and application of science and technology to development.

M.M.K.

CALENDAR OF FUTURE MEETINGS

1981

- | | |
|---------------------------|--|
| 23-24 May | Fourth Workshop on 'The Current Crisis on Nuclear Forces in Europe', Geneva, Switzerland |
| 26-29 May | 38th Pugwash Symposium, 'The Future of Pugwash', Rehovoth, Israel |
| 28 August-
2 September | 31st Pugwash Conference, Banff, Canada. (See next page for Agenda) |
| October/
November | Second Workshop on 'Averting Nuclear War: The Role of the Media', Geneva, Switzerland |
| November
(Tentative) | 9th Pugwash Workshop on Chemical Warfare, Czechoslovakia |

1982

- | | |
|-------------|---|
| late August | 32nd Pugwash Conference, Warsaw, Poland |
|-------------|---|

31st Pugwash Conference
Banff, Alberta, Canada. 28 August - 2 September 1981

THE SEARCH FOR PEACE IN A WORLD IN CRISIS

Agenda for Working Groups

1. Avoiding Nuclear War
 - (a) The role of deterrence
 - (b) Stopping the Nuclear Arms Race
 - (c) Nuclear Arms Limitation and Disarmament (SALT, Comprehensive Test Ban, Cut-off of Production of Fissionable Materials for Weapons etc.)
 - (d) Avoiding a new Cold War
2. Avoiding Conventional War
 - (a) Non-use of force
 - (b) M(B)FR (Vienna Talks) and other regional efforts
 - (c) The crisis areas and what to do
 - (d) Regional Commissions on security and disarmament
3. Negotiating Arms Limitation and Disarmament
 - (a) The negotiating mechanisms and their improvement
 - (b) SALT, the nuclear problem and the global arms race
 - (c) Other disarmament problems (e.g. CW, anti-satellite systems, nuclear submarine sanctuaries, etc.)
 - (d) The role of the 1982 UN Special Session on Disarmament
4. Enhancing International Security
 - (a) Improving the effectiveness of the UN
 - (b) The impact of military alliances and other groupings
 - (c) Crisis management and peacekeeping
 - (d) Regional approaches
 - (e) Confidence building measures
5. Energy, Resources and International Security
 - (a) Problems created by energy and other shortages
 - (b) Problems of shortages and international security
 - (c) Alternative sources
 - (d) Proposals for dealing with the problems
6. Security in the Developing World
 - (a) Militarization and the arms trade
 - (b) Nuclear proliferation
 - (c) Mechanisms for settling disputes
 - (d) Impacts of the major powers
 - (e) Other aspects

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