

# **NUCLEAR COLLABORATION WITH SOUTH AFRICA**

**REPORT OF UNITED NATIONS SEMINAR  
LONDON, 24-25 FEBRUARY 1979**

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## PREFACE

The danger of acquisition of nuclear weapon capability by the South African regime has now become a matter of utmost concern to the international community.

In the context of growing conflict between racism and the liberation forces in Southern Africa, the introduction of nuclear weapons can lead to an enormous threat to regional and international peace. At the same time, the development of uranium resources and the enrichment of uranium in South Africa provides the Pretoria regime with a powerful counter to international action against *apartheid*.

The United Nations Special Committee against *Apartheid*, therefore, convened a Seminar in February 1979 to consider the implications of South Africa's nuclear programme and to consider measures to promote the implementation of the resolution of the General Assembly for an end to all collaboration by governments and by corporations, institutions and other bodies and individuals with South Africa in the nuclear field.

The Seminar, held in London with the participation of front-line States, liberation movements, anti-*apartheid* movements and a number of scientists and other experts, produced a report which deserves the attention of all those concerned with peace and freedom.

I thank the World Campaign against Military and Nuclear Collaboration with South Africa for its cooperation with the United Nations Centre against *Apartheid* for publishing the report and undertaking to promote the widest public support for its conclusions.

E S Reddy  
Director  
UN Centre against *Apartheid*

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## I. INTRODUCTION AND OPENING STATEMENTS

The United Nations Seminar on Nuclear Collaboration with South Africa was organised by the Special Committee against *Apartheid* in cooperation with the Non-governmental Organisations Sub-Committee on Racism, Racial Discrimination, *Apartheid* and Decolonisation and the British Anti-*Apartheid* Movement. It was held in London on 24 and 25 February 1979.

The participants in the Seminar included members of the Special Committee, representatives of front-line States, national liberation movements of Southern Africa, anti-*apartheid* movements and other non-governmental organisations, and a number of scientists and other experts. The list of participants is reproduced as Annex I.

The Seminar began with an open meeting at which statements were made by HE Mr Leslie O Harriman, Chairman of the Special Committee against *Apartheid*, HE Mr Armando Panguene, Ambassador of the People's Republic of Mozambique to Portugal, Professor Eric Burhop, Emeritus Professor of Physics at the University of London and President of the World Association of Scientific Workers, Mr Sean MacBride, former United Nations Commissioner for Namibia and winner of Nobel and Lenin Peace Prizes, and Mr Abdul S Minty, Honorary Secretary of the British Anti-*Apartheid* Movement.

### A. Statement by HE Mr Leslie O Harriman

HE Mr Leslie O Harriman, Chairman of the Special Committee against *Apartheid*, said that the Seminar had been called to deal with one of the most serious and urgent problems before Africa and the world.

He pointed out that several governments, as well as a number of multinational corporations, institutions and individuals, were collaborating with the *apartheid* regime in the nuclear field and enabling it to acquire sophisticated weapons and technology in order to perpetuate racism, threaten African States and blackmail the world.

It was only after the disclosure in 1977 that South Africa was preparing a nuclear explosion that the Western Powers became concerned — not because the proposed test was by a criminal and desperate regime, but mainly because of its timing and because it would upset their plans on non-proliferation in general. Since then they had advocated inducing South Africa to join the Nuclear Non-Proliferation Treaty (NPT), which would mean giving further respectability to an illegitimate regime and providing it with even greater access to nuclear technology. Meanwhile, they continued collaborating with the *apartheid* regime, claiming that the relations were commercial and that each aspect of

collaboration does not by itself make South Africa a nuclear power.

Calling on the Seminar to consider all the implications and ramifications of nuclear collaboration with South Africa, he said that the danger was not only an immediate threat to the peace but a long-term threat of many dimensions.

With its military and nuclear power, the *apartheid* regime wanted to suppress any internal resistance, restrain and blackmail independent African States and persuade the Western Powers to recognise it fully as a regional power. It also wanted to play a dominant role in supplying uranium and enriched uranium to other countries so that they would become dependent on it, for both their peaceful and military nuclear programmes.

In conclusion, he declared that there was no right, in law or morality, to trade with the *apartheid* regime, to fraternise with that regime or to assist it in its diabolical plans. *Apartheid* was a crime against humanity and anyone who collaborated with the *apartheid* regime was guilty of abetting that crime.

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### B. Statement by HE Mr Armando Panguene

HE Mr Armando Panguene, representative of Mozambique, said that nuclear weapons in the hands of the racist rulers of South Africa presented a deadly threat both to the people of South Africa and to the neighbouring independent States.

The purpose of South Africa's nuclear threat was clear. It was to convince the oppressed masses of South Africa that the *apartheid* state was invincible; it was to intimidate both the national liberation movement and independent Africa. Through nuclear blackmail, South Africa hoped to coerce African States to stop supporting the liberation struggle, particularly the front-line States, all of whose capitals were within reach of South African nuclear weapons.

Mozambique was well aware of the military strength of South Africa and the danger that it represented to the entire region. The South African regime had always collaborated, economically and militarily, with the Portuguese colonial regime to oppress the Mozambican people and prevent the birth of an independent Mozambique. South Africa also gave massive assistance to the illegal regime of Ian Smith in the murderous Rhodesian attacks against the front-line States. The Mirage jets used by Smith's forces in recent raids against Mozambique had been manufactured under licence in South Africa. Only with the collaboration of South Africa could

vital supplies, such as oil, reach Rhodesia and maintain Smith's machinery of war.

But the people of Mozambique were not intimidated by the threats of the Salisbury and Pretoria regimes and their allies. Mozambique would continue to support the struggles of the peoples of Namibia, Zimbabwe and South Africa itself.

Mr Panguene continued that the responsibility for the danger of an eventual use of nuclear weapons by South Africa did not lie with the racist South African regime alone. South Africa could not possess the technology required for the production of nuclear weapons without the collaboration of Western Powers. The Federal Republic of Germany, France, Britain and the United States had all contributed to the development of this threat.

The West had always talked about solving the problems of Southern Africa through peaceful means, but was at the same time contributing on a massive scale to South Africa's military strength. There was a state of war in Southern Africa: the real question was not whether one was in favour of war or peace, but whose side one was on in the war that already existed. South Africa's armed forces had developed their present capacity through direct purchase of equipment from the West and through agreements whereby Western equipment

could be manufactured under licence in South Africa. From providing military aircraft and vehicles, such as the British Leyland Land Rovers used in the massacre of Soweto school-children, it was only a small step to providing the technology for nuclear bombs.

If nuclear weapons were ever used in Southern Africa, then it was the Western governments — which made profits from sales of weapons and technology and exploited the labour of the people of South Africa and Namibia — which would be guilty of mass murder.

The problem of South Africa's nuclear capability had arisen, he added, in the context of the great advance of the liberation struggle in Zimbabwe and Namibia and in South Africa itself. If the Pretoria regime sensed that it faced imminent defeat, there existed a real and terrible danger that it might use tactical nuclear weapons either against its own population or against independent Africa, first and foremost the front-line States. This was a clear threat to world peace and security and fully justified the action of the Government

of Mozambique, together with other States in the region, in calling for the creation of a denuclearised zone — a zone of peace— in the Indian Ocean.

South Africa, he concluded, must be isolated still further. An effective and total embargo must be applied on all military equipment. The definition of military equipment should be very wide: it should, for instance, cover oil, without which no army can function.

He hoped that the Seminar would call on all governments to take action to break links with the South African regime, to halt immediately further exchanges of technology and all other forms of nuclear collaboration, and to support actively the liberation struggle. He also hoped that the Seminar would call for the international recognition of the liberation movements as the legitimate representatives of their peoples, and for increased support for the front-line States so as to strengthen their defensive capacity.

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### C. Statement by Professor Eric Burhop

Professor Burhop said that the World Association of Scientific Workers had, from its very inception, advocated the abolition of nuclear weapons and supported the NPT as a first step. Proliferation of nuclear weapons to South Africa, with its system of racism, had implications too terrible to contemplate from the point of view of the future of mankind. It was incredible that any encouragement should be given by any government to such development.

And yet, there was a long history of cooperation in the nuclear field, particularly by the United States of America and the United Kingdom, with South Africa. It began with attempts immediately after the Second World War to get South Africa involved in the production of uranium in the gold mines. Subsequently, large deposits were found in Namibia and the Rossing mine was developed by Rio Tinto Zinc.

There was also a long history of association with South African scientists. Many South African scientists who had been trained in the United Kingdom now worked in South Africa. South Africa had many hundreds of competent physicists and there was no doubt about its capacity to develop nuclear weapons if it wished to do so.

There was a real danger of nuclear capability in South Africa which could or might have already produced a few

nuclear weapons. But this capability should not be exaggerated. The dangers which lay ahead, if the projects which were now being discussed got under way, were so great in comparison that any exaggeration of the present capability would detract from a recognition of the future threat.

Referring to the report last year that South Africa was ready to test nuclear weapons in a testing range in the Kalahari Desert, he said that the pilot enrichment plant was the most likely source from which South Africa would have accumulated some three or four nuclear weapons. That plant had been built by South African scientists using the jet nozzle process which had certainly been supplied to them by a West German firm.

The pilot plant was free from any inspection and was by itself very dangerous. But there was a proposal to expand it by a hundred times by 1985.

One motivation of South Africa might be to sell uranium more profitably as enriched uranium. But if such a large-scale plant was developed there would be an enormous danger to the stability and peace in the region.

In short, there was already a danger since South Africa certainly had nuclear capability and might have already accumulated a few nuclear weapons. But there was a very much greater potential danger from an expanded enrichment plant.

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### D. Statement by Mr Sean MacBride

Mr MacBride said that he saw no greater danger, not only to Africa but to the rest of the world, than to have a situation in which South Africa had become, or might become, a nuclear power.

Certain facts were already clearly established. South Africa had been enabled to acquire capacity to make nuclear weapons with the assistance of West Germany. Whether the assistance was given with the direct intervention of the Government of the Federal Republic of Germany or whether that government merely permitted firms to transfer the necessary technology and equipment was not material. The Federal Republic of Germany was bound by the Nuclear Non-Proliferation Treaty and it had a special responsibility to ensure that nothing would be done by West German firms to proliferate nuclear weapons to South Africa.

Collaboration between West Germany and South Africa, he said, dated back to several years. It had been initiated to a certain extent through the auspices of NATO and had been

originally limited to conventional weapons and communications systems. It was then extended to assisting South Africa to become a nuclear power.

The matter was taken a step further in December 1976 at a conference in Zurich attended by Mr B J Vorster, then Prime Minister of South Africa, Dr Henry Kissinger, then Secretary of State of the United States of America, and General Alexander Haig, Commander-in-Chief of the NATO Forces. It was agreed at that meeting that South Africa would be assisted to secure the formation in Namibia and Zimbabwe of governments which would be acceptable to the United States and South Africa. Closer collaboration in regard to arms and in the nuclear field had developed from that conference.

Mr MacBride suggested that the present administration in the United States should be asked whether it supported the collaboration which was established in 1976. He believed that it would not have gone as far as the previous administration. But in view of the collaboration of some NATO countries, and

of NATO itself, with South Africa, the Seminar was entitled to ask for a statement of policy from the major NATO countries.

Mr MacBride said he did not believe that Denmark, Iceland, the Netherlands and Norway would go along with the degree of collaboration which had developed with South Africa. Direct approaches should be made to those countries, and also to the EEC countries.

He suggested that the United Nations Committee concerned should make direct representations to the forthcoming conference for a review of the operation of the NPT with regard to the extent to which South Africa had been enabled to become a nuclear power and the extent to which the Federal Republic of Germany had been able to circumvent the Brussels Treaty by her collaboration with South Africa. They should also make representations to the United Nations bodies on disarmament, the Disarmament Commission and

the Committee on Disarmament.

Another aspect was the degree of collaboration between Rio Tinto Zinc and South Africa. The uranium from the Rossing mine might be used by the South Africans to produce nuclear weapons. He suggested an approach to the British Labour Party which had taken a strong stand against the Rio Tinto Zinc contract.

He also suggested a direct approach to the OAU and its member States to encourage them to exert their influence against collaboration by some Western governments with South Africa.

Finally, he suggested that the available facts should be widely publicised so that public opinion could express itself, and available documentation sent to all non-governmental organisations which had been involved in disarmament and human rights issues.

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### E. Statement by Mr Abdul S Minty

Mr Minty said that the Anti-*Apartheid* Movement did not believe that arguments, reason or information about the danger that South Africa's nuclear threat presented to world peace would by themselves change the policies of the Western powers. Pressure and public action were needed. Facts were important and the Seminar could help assemble all the relevant information and publicise it in such a way as to help stimulate action.

It was also known that South Africa had the means of delivery: (a) the Crotale system and other similar missile systems developed in the late 1960s; and (b) aircraft such as the Buccaneers and Mirages.

The Anti-*Apartheid* Movement rejected the claims that Western collaboration with South Africa in the nuclear field was for peaceful purposes only. The role of uranium was crucial: South Africa's vast reserves of uranium and its growing enriched uranium capability added to its bargaining and blackmailing power and increased its threat to international peace.

As a member of the International Atomic Energy Agency (IAEA), South Africa received all the benefits associated with membership, not only on a formal level but also informally in terms of meeting with other scientists and experts in the nuclear field. The Anti-*Apartheid* Movement rejected the argument that South Africa should be allowed to stay in the IAEA, where it could be influenced, even controlled. All evidence had shown that this kind of argument only led to increased collaboration. In November 1978, the Uranium Extraction Technology Group, established by the IAEA and the OECD Nuclear Group, had elected a South African delegate as Chairman. The Seminar should, therefore, call for the expulsion of South Africa from the IAEA.

The Anti-*Apartheid* Movement also rejected the arguments put forward in favour of persuading South Africa to sign the NPT. All diplomatic activity by the Western Powers, after the disclosure of South Africa's plans to stage a nuclear explosion in 1977, had been concentrated on getting South Africa to sign the NPT. If South Africa did sign the NPT, that would only mean more collaboration with South Africa, greater respectability for the *apartheid* regime and a lulling of public opinion into believing that South Africa was no longer a nuclear threat. When South Africa was formally installed as a member of the 'nuclear club' there would be the argument that South Africa was so powerful that if it was provoked that

would lead to massive destruction and violence. There would be stronger pressure for going soft on the *apartheid* regime and against supporting the liberation movement.

South Africa's nuclear capability should also be seen in the context of powerful forces in the Western countries which wished to develop South Africa as a regional power in the southern hemisphere and around the South Atlantic and Indian Oceans, to integrate it into the overall Western defence strategy and to build, either formally or informally, a close alliance of NATO with South Africa. Such a development must be resisted since it would extend South Africa's destructive capability as well as its ability to blackmail the world.

It was not only South Africa which was a major threat to international peace and security. The policies of certain Western Powers towards the Pretoria regime also constituted a serious threat to world peace: it was they who were responsible for creating a nuclear Frankenstein in Africa.

It was now an urgent matter to expose the allies of *apartheid*, condemn their policies and, above all, mobilise world public opinion to end all collaboration with South Africa.

Mr Minty commended the African National Congress and the West German Anti-*Apartheid* Movement for exposing the collaboration between West Germany and South Africa. He drew attention to a report in the *South African Digest* of 9 February that an international conference on disaster medicine would be held in August in Cape Town, to discuss among other matters the mobilisation of South Africa's medical and other services to deal with atomic explosions.

The report of the Seminar, he said, should be sent to the Security Council, which should be asked to take action to ensure the cessation of all nuclear collaboration with South Africa. That would be very difficult in view of the policies of the Western Powers. And even if it succeeded there was no doubt that South Africa would persist with its nuclear programme.

It was important, therefore, to obtain support for the proposition that, in the context of South Africa's nuclear threat, mandatory economic and other sanctions against it were imperative.

Finally, as South Africa's threat to world peace increased, it became more urgent to destroy the *apartheid* system. Everyone who wanted to bring about freedom in Southern Africa and peace in the world should, therefore, give full support to the liberation movement.

## II. SUMMARY OF DISCUSSION

### A. South Africa's nuclear capacity and potential

The experts participating in the Seminar were in general agreement that South Africa has a nuclear capability at present. It probably has a few nuclear devices which it could test, though as a result of modern methods of simulation it was not strictly necessary to explode any test devices.

South Africa has a large number of highly trained nuclear scientists and other skilled personnel and could therefore produce a reasonably sophisticated nuclear weapon.

It could produce a nuclear device either from plutonium or from the enriched uranium which it could have accumulated at the pilot enrichment plant.

South Africa's major nuclear installation is the Safari-I research reactor, supplied by the United States of America and operational since 1965. It has so far received 104 kilogrammes of enriched uranium from the United States of America and its spent fuel elements have in the past been reprocessed in the United States and the United Kingdom. The United States has not supplied enriched uranium for over two years and unless South Africa has some other adequate source of enriched uranium — such as the pilot uranium enrichment plant — the Safari-I reactor would soon have to be closed down. The Safari-I is subject to IAEA safeguards.

South Africa's other reactor, Safari-II, operates at low energy and uses two per cent enriched uranium which comes from the United States: the uranium enrichment for this plant is claimed to be too low to be used for nuclear weapons.

South Africa's pilot uranium enrichment plant which has been operating since 1975 is secret and not subject to IAEA inspections or to any form of international control. This plant can enrich natural uranium and thus enable South Africa to end its dependence on the United States' supplies. Although there has so far been no public announcement about the construction of a commercial scale enrichment plant, it is likely that the existing pilot plant itself will be constantly enlarged, thus increasing the quantity of enriched uranium produced in South Africa.

The Koeberg nuclear power reactors being built by French companies could, in theory, produce 400 kilogrammes of plutonium per year, which is enough to produce a Nagasaki-type weapon every week. The United States has contracted to supply the enriched uranium for this facility from 1981.

There is no doubt that South Africa has adequate technical knowledge and expertise to build its own nuclear devices and it could use for nuclear material either enriched uranium or plutonium. It is much easier to make a plutonium bomb because of the ready availability of design information and equipment as well as greater certainty in predicting its probable yield. South Africa could have diverted plutonium from the Safari-I or indeed constructed its own secret reactor plant for the production of plutonium for nuclear weapons. Alternatively, if enriched uranium has been used it could have come from fuel supplied for Safari-I, though that would have been detected easily, or — more likely — it could have been produced by the pilot enrichment plant which is not subject to any safeguards.

South Africa can easily deliver a nuclear device by any of the several aircraft in its Air Force and it also has access to various rocket and missile systems.

In view of South Africa's substantial nuclear capability, ending international collaboration by itself will not prevent it from producing nuclear weapons. But effective disengagement can slow down the rate at which South Africa can increase its capability.

### B. Threat to international peace and other dangers

The Seminar agreed that the threat to international peace and security resulting from the situation in South Africa has greatly increased as a result of the acquisition of nuclear capability by the *apartheid* regime. If it were permitted to proceed with its plans for nuclear development and accumulate a large number of nuclear devices and supplies of plutonium and enriched uranium, there would be an enormous danger to international peace, not only regionally but globally.

It was not merely a question of proliferation of nuclear weapons but also the acquisition of nuclear capability by a racist regime which is illegitimate and criminal and which has a record of violence against the great majority of its people and of constant aggression against neighbouring States. The situation was, therefore, unique.

The threat is, first of all, to the oppressed people of South Africa who constitute the great majority of the population of the country. The *apartheid* regime has developed nuclear capability because of the growth of the struggle of the national liberation movements of Southern Africa against the racist regimes and the launching of armed struggles.

In this connection, the African National Congress of South Africa presented documentation which indicated that the regime planned to conduct explosions in areas where there was little white population and in border regions.

Secondly, the threat is to the front-line States and indeed to all African States which support the struggle for liberation.

Thirdly, the threat takes on global dimensions, especially if South Africa is allowed to proceed with its present plans.

South Africa has not only the capability to make nuclear weapons, but also a sophisticated delivery system. It is a desperate regime, bent on perpetuating racism by resort to force, in defiance of Africa and the world. There is thus a grave danger of nuclear blackmail leading to nuclear strike.

Several participants emphasised that the governments of countries which provide assistance to South Africa in the nuclear field bear direct responsibility for aggravating the threat to peace. They also stressed the responsibility of several multinational corporations which are involved, directly or indirectly, in South Africa's nuclear development projects.

The Seminar also examined the full implications of international dependence on South Africa as a major source of uranium. It recognised that South Africa's involvement in Western nuclear programmes, since the 1950s, has been largely due to its role as a supplier of uranium. In order to have continued access to South African uranium, the United States of America, the United Kingdom and other Powers entered into various agreements and contracts with the Pretoria regime; their relationships cover most areas of nuclear research and development and so in essence South Africa is integrated into the long-term programmes of the nuclear powers, chiefly as a source of uranium.

Over the years South Africa has entered into long-term uranium supply contracts with various powers, including the United States of America, United Kingdom, France, Federal Republic of Germany, Japan and Belgium. The expansion of the international atomic power programmes is therefore partly dependent on South African uranium and, as these programmes expand further, the dependence on South Africa has also grown.

South Africa's role as a source of uranium also enables it to obtain valuable foreign exchange from the sale of uranium, as from gold sales. The role of uranium as an earner of foreign exchange directly strengthens the South African economy

and enables the regime to overcome its otherwise serious balance of payments problems.

In order to enhance even further South Africa's role as a supplier of uranium, the Pretoria regime has embarked on a programme to enrich uranium within the country. In collaboration with Steag and other companies in the Federal Republic of Germany, it established a pilot uranium enrichment plant in 1975 and has declared its intention to build a full scale commercial plant.

At present there are no non-nuclear weapon countries which supply their own enriched uranium. Those countries which receive nuclear plants and equipment are subjected to additional controls which are imposed by the suppliers of enriched uranium. Once South Africa is able to supply its own enriched uranium to other countries, not only would that enhance South Africa's economic and political power but it would at the same time enable other countries effectively to by-pass existing safeguard procedures imposed by the present suppliers of enriched uranium.

The provision to any country of enrichment technology is very dangerous because of its implications for nuclear proliferation and, in the case of South Africa, it is particularly dangerous since South Africa has its own sources of uranium. With the capacity to enrich uranium, there is virtually no external limitation on the quantity of uranium it enriches or to whom it supplies it. This would give South Africa a commanding bargaining power and create a very special dependence on the *apartheid* regime in relation to a highly strategic commodity.

Several participants, therefore, considered it essential that all importation of uranium from South Africa be ended, that South Africa be denied all technology for uranium enrichment, and that its enrichment plant be dismantled.

## C. Nature and extent of external collaboration with South Africa

### 1. INTRODUCTION

The Seminar examined the proposition that the nuclear relations of certain powers with South Africa are limited to so-called peaceful areas which do not enhance the Pretoria regime's nuclear military capability. It reached the conclusion that it was virtually impossible to have a clear dividing line between nuclear technology for peaceful purposes and that for military capability.

There was overwhelming evidence that South Africa had nuclear military capability and potential. It was warned in 1977 by the major Western Powers not to proceed with its planned nuclear explosion in the Kalahari Desert. South Africa could never have reached its present nuclear capability without the substantial and comprehensive nuclear assistance it received from the major Western Powers.

It was alarming that even after the 1977 warning to South Africa to desist from exploding its nuclear device the Western Powers had not reduced or ended nuclear collaboration with the Pretoria regime. Indeed, there has been even more nuclear collaboration in the meantime and consequently South Africa's capability and potential have been advanced even further.

The Seminar examined reports on nuclear collaboration with South Africa by several countries and received papers from the anti-*apartheid* movements in those countries. They showed that a number of governments and multinational corporations had provided assistance to the *apartheid* regime for many years in utter disregard of the appeals of the United Nations, the Organisation of African Unity and the national liberation movement, and of the enormous dangers to international peace.

They have thereby treated with contempt the ardent desire of the African States for the denuclearisation of the continent.

Despite the refusal of the *apartheid* regime to join the NPT, they have recklessly continued to transfer to it technology and equipment to facilitate its nuclear programme.

This collaboration has extended to many areas such as assistance in the extraction and processing of uranium; the training of large numbers of South African nuclear scientists; the visits of nuclear scientists to South Africa; participation of South Africa in conferences on nuclear matters; transfer of nuclear technology; and provision of reactors and other equipment.

Special mention must also be made of provision of finance for South Africa's nuclear programme. A cessation of investments in, and loans to, South Africa, it was felt, would be an essential measure to prevent an expansion of South Africa's nuclear capability. It was pointed out that the *apartheid* regime was recently obliged to defer or curtail its plans for nuclear enrichment facilities because of difficulties in obtaining finance.

Of special relevance in this connection was the stubborn resistance by the governments concerned to international action to prevent South Africa from obtaining nuclear weapons capability. The importance of mobilisation of public opinion in those countries, and of diplomatic action by all States committed to peace, was therefore essential.

## 2. UNITED STATES OF AMERICA

The Executive Secretary of the American Committee on Africa (ACOA), Mr George Houser, said that it was principally the United States which had created South Africa's nuclear capability. He recalled that Dr A J A Roux, President of the South African Atomic Energy Board (SAAEB) had declared in October 1976:

'We can ascribe our degree of advancement today in large measure to the training and assistance so willingly provided by the United States of America...'

Now that it is clear that South Africa has acquired a large degree of nuclear sophistication, the United States Government has an understandably anxious commitment to exercise some 'control' over the South African nuclear programme.

United States interest began with the purchase of South African uranium in the early 1950s. This trade continued until 1965 when the United States no longer needed foreign uranium supplies. By that time, the Government was working together with commercial interests to assist South Africa with its own programme. By 1977 at least 155 South African scientists had visited American nuclear facilities and over 90 had assumed positions in the United States.

On 8 July 1957 the United States signed an agreement with the Government of South Africa for full cooperation in nuclear development until the year 2007. Ironically that agreement was called 'Atoms for Peace' by the Eisenhower administration. Today, a vital concern of the United States Government was to receive some guarantees from South Africa that its nuclear potential would be used for 'peaceful' purposes.

In 1961 Allis Chalmers contracted to build South Africa's first nuclear reactor, Safari-I, at Pelindaba. Eight United States research organisations had cooperated in this venture, which was completed in 1965: Argonne Laboratory, the National Laboratories at Brookhaven and Oakridge, Rochester University, the University of Illinois, New York University, Massachusetts Institute of Technology and the Reno Research Centre.

In 1963 Foxboro International sent two computers to Pelindaba along with technicians to train white South Africans. Since Safari-I has been in operation, the United

has supplied the reactor with more than 231 pounds of enriched uranium, enough to construct 10 bombs of the type employed by the United States during World War II.

As a result of the training which South African scientists received in the United States and the use of the research reactor at Pelindaba, the South Africans were able to construct a second reactor, 'Pelindaba Zero', at the same site. The significance of this second reactor is that, as an indigenous project, it is not subject to IAEA controls of any sort.

The work of the African National Congress and the West German Anti-Apartheid Movement has disclosed the close collaboration of the West German Government in South Africa's enrichment capability. However, vital nuclear hardware has also been supplied by the United States for the construction of an enrichment plant at Valindaba. Among those mentioned in the report are Federal Products, Providence — precision equipment; Varian MAR — isotope gauging equipment; SWF Gustava-Rau (ITT subsidiary) — ventilation and cooling systems; and possibly Honeywell and Leeds and Northrup — electronic equipment.

South Africa also made plans for a large enrichment plant or expansion of the pilot plant to reach full capacity by 1985. This development placed South Africa in direct competition with the United States as the leading exporter of uranium.

In November 1978 the Energy Policy Information Center of Boston revealed that four New England utilities had inquired into purchasing 9.2 million pounds of South African uranium at a market value of \$460 million. However, Congressional and public reaction influenced them to withdraw the inquiry.

This incident illustrates the increasing importance of uranium on a world scale. While present use is approximately 30,000 pounds a year, it is expected to leap to 80,000 pounds by 1985. The United States is expected to provide roughly 26 per cent of its electrical needs by nuclear power by 1985 — a 250 per cent increase from today.

The uranium industry could become a significant economic windfall for the South African *apartheid* regime and could have grave consequences in the attempt to end the racist *apartheid* policies now in force in that country.

It is out of concern that this scenario could take place, as well as awareness of South Africa's nuclear threat, that the American Committee on Africa maintains that all member States of the United Nations should cease all nuclear collaboration of any sort with South Africa until the racist policies have ended and true majority rule established. This appeal is made particularly to the Government of the United States as the leader in nuclear collaboration historically and as a principal party in present negotiations with South Africa on the nuclear issues.

While the United States Government claims that there has been no nuclear collaboration of any sort with South Africa since 1976, it is clear that United States policy has not changed since the Eisenhower administration. The basis for the claimed cut-offs of supplies of enriched uranium has not been to focus on South Africa's *apartheid* policies, but rather to move South Africa to sign the NPT. The signing of the treaty would reopen 'friendly relations' with South Africa and a continuance of the traditional policy.

The two most significant obstacles to ending *apartheid* with a South African nuclear build-up are: (1) the threat of nuclear weapons; and (2) the tremendous bargaining position of uranium in a dependent world. Present United States emphasis on NPT is only concerned with the first. The United States Government insists that it must not 'discriminate' against any nation in the supply of nuclear fuels and technology to promote free world access. However, it is clear that the United States does discriminate according to what suits its interests. It will not provide enrichment and reprocessing technology to developing nations. (An additional

concern here is that some developing nations, eager to acquire nuclear technology, might consider trading with South Africa if unable to obtain it from other countries.)

The signing of a treaty would not preclude the possible nuclear threat from South Africa. South Africa has announced that, in the case of an attack, no rules would apply — including any treaty that South Africa might sign.

While nuclear threat is an obstacle to accelerated international pressure on South Africa to end *apartheid*, the more significant obstacle is the increased bargaining position that South Africa is acquiring on the international scene through the uranium industry.

While the United States appears not to be in immediate danger of dependency on South African uranium ore, there are significant American interests in related industries upon which the United States has become dependent.

The most obvious is the gold industry. At this time, most South African uranium is extracted as a by-product of gold mining. United States interests are the largest foreign investors in South African gold mines. Therefore, the United States investors have a considerable stake in the state of the South African uranium market.

In addition to direct involvement in South African mining efforts, United States interests have also gained concession agreements of their own. Union Carbide and Utah Mining have been conducting explorations in Cape Province, near Beaufort West, since 1973. Exxon, Newmont Mining and United States Steel have also sought concessions.

A known American firm prospecting in Namibia is O'Kiep Copper Company, a subsidiary of Newmont Mining.

This kind of complex and substantial involvement in the nuclear fuel industry in South Africa places the United States and other highly developed nations in a state of dependency upon South Africa. This dependency greatly increases South Africa's bargaining power with these nations on any matter and this power appears to be growing as the nuclear industry grows.

It is precisely this kind of dependency that has focused United States strategy on the NPT and away from confrontation with South Africa. United States policy is directed toward renewed trade, not for the purpose of 'increased influence' upon South Africa, but toward increased dependence or interdependence.

United States action at the United Nations on nuclear collaboration with South Africa is illustrative. It opposes recommendations to cut off all nuclear cooperation with South Africa and only favours efforts to prevent South Africa from developing a nuclear weapon capability.

Mr Houser suggested four types of action by the United States and the international community in order seriously to confront South African nuclear buildup:

- (a) directing focus away from persuading South Africa to sign the NPT
- (b) destroying South Africa's bargaining position by ending technology cooperation and by breaking dependency on South Africa in trade
- (c) instituting total economic sanctions
- (d) removing South Africa's foothold in Namibia.

### 3. UNITED KINGDOM

The representative of the British Anti-Apartheid Movement, Mr Michael Terry, said that criticism of Britain's links with South Africa in the nuclear field has usually concerned Britain's involvement in the Rossing uranium project. In practice, however, Britain has played a much more central role in developing South Africa's nuclear capability than is generally recognised.

Britain's involvement with South Africa in the field of uranium extraction dates back to the immediate post-war

period. Britain and the United States had formed a joint uranium procurement agency, the Combined Development Agency (CDA), which soon chose to examine the possibilities of extracting uranium from the Rand gold mines. On 23 November 1950 the CDA entered into an agreement with the South African Atomic Energy Board (SAAEB) for the development of uranium production on four mines. CDA's involvement, however, went much further than that of a mere purchaser of uranium. As part of an agreement between CDA and SAAEB loans, at an estimated R66 million in total, were raised in Britain and the United States to provide for the capital costs of the uranium oxide production plants. In return the CDA was the sole customer of South Africa's uranium oxide production. During the 1950s CDA's involvement expanded: uranium production was extended to 27 mines, 17 uranium oxide extraction plants were built, together with nine sulphuric acid plants to provide acid for the extraction process.

In turn, production rose from zero in 1950 to 6,400 tons of uranium oxide in 1959.

South Africa's uranium extraction industry, at least in its crucial initial stages, was financed entirely by British and United States capital. Equally significant was the contribution by Britain and the United States in directly enabling South Africa to perfect its extraction and processing capacity.

In 1957 the United States/South Africa Agreement for Cooperation Concerning Civilian Uses of Atomic Energy was signed, and it covered the supply of enriched uranium from the United States to Safari-I. The responsibility for production of the enriched fuel elements was, however, entrusted primarily to the United Kingdom Atomic Energy Agency (UKAEA) at Harwell. According to figures published in the United States, from October 1967 to April 1975 the UKAEA supplied 62.075 kg of U-235.

Interchange of nuclear experts has been a common feature of British/South African relations during South Africa's nuclear build-up. As early as 1955, at the First International Conference on the Peaceful Uses of Atomic Energy in Geneva, one of the leading figures on the South African delegation, Dr B F J Schonland, was attached to the Atomic Energy Research Establishment at Harwell. British-trained nuclear physicists today dominate SAAEB and the nuclear programme of the Electricity Supply Commission (ESCOM) itself is headed by a former employee of the UKAEA, John Colley. Through these informal interchanges of personnel, South Africa has been able to obtain valuable technical 'know-how' and expertise.

During the development of South Africa's nuclear programme, contact was maintained at the highest level under both the Labour and Conservative Governments. For example, in August 1965, when the Pelindaba reactor went 'critical', Sir William Penney, Chairman of UKAEA, visited South Africa for its formal inauguration. Then, in November 1970, the current Chairman of UKAEA, Sir John Hill, was in South Africa to inspect nuclear projects. The following June a reciprocal visit to Britain by the President of SAAEB, Dr Roux, was exposed in the British press. Included in his itinerary was a visit to the fast breeder reactor at Dounreay. Significantly this visit coincided with an 'arms-buying tour' of Britain by the then Defence Minister, P W Botha. Dr Roux was received at the highest level, his official guides being Sir John Hill and UKAEA's reactor assessment expert, Dr Bainbridge.

The return of the Labour Government in 1974 did not result in the termination of these relations. A visit by two nuclear experts from the SAAEB to the atomic energy establishment at Risley was revealed by the Anti-Apartheid Movement in November of that year. During the political row caused by this visit, UKAEA admitted the existence of an official commercial agreement between the United Kingdom

and South Africa in the nuclear field.<sup>1</sup>

A much more significant collaborative exercise is the provision of technology to South Africa to produce 'Hex', or uranium hexafluoride, which is the final product required before enrichment. During the 1960s UKAEA had an agreement with the South African Nuclear Fuels Corporation whereby it had the first option on all uranium ore for conversion to hexafluoride. However, the South Africans were determined to develop their own conversion process in preparation for their own enrichment programme. In October 1970 the South African press reported that the British Government was on the point of deciding whether to provide the technology to South Africa. No government announcement was ever made – but Dr Roux announced later that month that South Africa was going to build its own conversion plant, in collaboration with overseas interests.

The Rossing project in Namibia, however, is the clearest example of direct British collaboration. The mine itself, which came into production in 1976, is the largest single mining venture in Namibia – and takes the form of extensive low-grade uranium deposits. The project involves direct collaboration between the South African authorities through the Industrial Development Corporation of South Africa and the British-based transnational Rio Tinto Zinc, which has the largest equity holding in Rossing and has been primarily responsible for the mine's development.

The main contract for the supply of uranium from Rossing is with the British Nuclear Fuels Ltd, a parastatal corporation linked with UKAEA, for the supply of 7,500 tons of uranium between 1977-82. The contract, approved by the United Kingdom Government, has been the subject of ongoing protests, in particular following the adoption of Decree No 1 of the United Nations Council for Namibia on the Protection of Namibia's Natural Resources.

The Rossing project has enabled the South Africans to develop even more sophisticated and technically advanced extraction processes for low-grade ore.

The United Kingdom has contributed to the development of South Africa's nuclear capability in two further ways. First, through the raising of capital for the financing of South Africa's nuclear programme. A recent specific example was the participation of Barclays Bank in a £600 million loan to ESCOM's Koeberg nuclear power station programme.

South Africa's nuclear programme was also dependent on a wide range of technical personnel and, again, Britain has been a crucial recruiting ground. Regular advertisements have appeared in the British press for nuclear scientists. Construction programmes in the nuclear field also require a wide range of engineering expertise. One company which has played a key role in the nuclear construction industry, Roberts Construction, recently attempted to organise a nationwide recruiting campaign in British universities, only to be faced with constant disruption by anti-apartheid activists.

The policy of the British Government was expressed in its most explicit form when it chose to join other Western permanent members of the United Nations Security Council in October 1977 in vetoing a draft resolution calling for the termination of all forms of nuclear collaboration with South Africa.

The British Government has continued to deny that the relations between Britain and South Africa in the nuclear field had any military significance. Instead Britain sought to

1. In a report of SAAEB in 1972 Dr Roux had claimed that cooperation agreements existed with the United States, the United Kingdom and France. There is no evidence that any of these agreements has ever been terminated. Various press reports indicate that the degree of collaboration is much greater than would be apparent from official reports and documentation. For example, in 1967 the *Cape Times* reported that South Africa was monitoring the French atomic tests in the Pacific in collaboration with Harwell and the United States monitoring network.

reduce the issue of nuclear collaboration with South Africa to the more general issue of nuclear proliferation. Dr David Owen, the Foreign and Commonwealth Secretary, stated in November 1978:

'The United Kingdom and the United States will persist in active efforts to persuade South Africa to sign the NPT and accept international safeguards on all her nuclear facilities. This would be the best way for South Africa to allay suspicions about her nuclear intentions.'

This policy conveniently allows Britain to continue to sustain its collaboration with South Africa in this field without bringing into question the effect of this collaboration.

Greater exposure of the links, more determined campaigning and greater understanding of the importance of this issue was necessary in Britain. The United Kingdom Government should be required to implement national policies, including:

- (a) the banning of all uranium imports from South Africa and Namibia
- (b) the termination of all agreements between Britain and South Africa in the nuclear field
- (c) legislation to prevent British citizens from working in nuclear establishments in South Africa
- (d) the end of all exchange of technical 'know-how' in the nuclear field, academic exchanges, etc
- (e) measures to ban all other forms of collaboration with South Africa which could enhance its nuclear capacity and potential, including the provision of capital.

#### 4. FRANCE

The representative of the *Mouvement contre le Racisme et pour l'Amitié entre les Peuples (MRAP)*, Mr Albert Levy, described the nature and extent of French relations with South Africa in the nuclear field and, in particular, France's role in the construction of a nuclear power project at Koeberg.

On 29 May 1976 an agreement was reached between France and South Africa for the Koeberg project which led to widespread international condemnation. The contract, estimated to be worth between six and eight billion francs, was signed by South Africa's ESCOM and three French industrial corporations (Framatome, SPIE-Batignolles and Alstom).

The decision of the *apartheid* regime to proceed with the Koeberg nuclear project was primarily due to South Africa's vulnerability in the energy field. Because of the threat of sanctions, Mr B J Vorster, then Prime Minister, announced that South Africa was progressively substituting the production of electricity from oil by other means. South Africa had stockpiled an enormous reserve of oil and developed the production of hydro-electricity, and in 1974 decided to launch a nuclear energy programme.

French relations with South Africa in the nuclear field in fact preceded the Koeberg agreement. France had provided equipment for the Safari-I reactor and in 1966 had sent technicians to assist with that project. In 1968 the French company Sodetag, which is involved in France's own nuclear arms programme, set up a branch in Johannesburg. Other French companies have also provided equipment in the nuclear field to South Africa, notably those which subsequently won the Koeberg contract.

French companies have also been actively involved in prospecting and in the extraction of uranium, both in South Africa and Namibia. In 1977 a ten-year contract was signed between France and South Africa for the supply of uranium to France.

France is also directly involved in the Rossing uranium project in Namibia. A French group, Minatome, formed by CFP-Total and PUK, has a 10 per cent holding in the mine. The French airline UTA each week brings a cargo of uranium

from Windhoek to France.

Mr Levy said that this nuclear collaboration should be viewed in the context of the central role played by France in providing military equipment to South Africa from 1963 to 1977, and the great increase in France's economic relations with South Africa. A French banking consortium, led by the nationalised Credit Lyonnais, was providing 85 per cent of the capital required for the Koeberg nuclear project.

Mr Levy suggested that world public opinion should be constantly informed of the daily crimes of *apartheid*. In the countries which continue to aid South Africa in the nuclear field there should be campaigns for the creation of commissions of inquiry, either parliamentary or extra-parliamentary, with the object of exposing the nuclear collaboration with South Africa. The United Nations should launch a similar inquiry and the Centre against *Apartheid* should publish all available information. Campaigns should be organised for the adoption by the United Nations Security Council of an effective boycott in the nuclear field. In the EEC countries a campaign must be organised in connection with the forthcoming elections to the EEC Parliament with the aim of alerting public opinion about this grave issue.

#### 5. FEDERAL REPUBLIC OF GERMANY

The representative of the Anti-*Apartheid* Movement in the Federal Republic of Germany, Mr Wolf Geissler, said that there was no economic justification for South Africa's nuclear plans. The centre of South Africa's nuclear activity – the enrichment plant – could only be explained by South Africa's military ambitions, and the assistance provided to South Africa had been given with the knowledge of these ambitions.

West Germany was playing a special role in South Africa's nuclear programme. Its collaboration was prompted by its wish to make nuclear weapons for itself and this wish had now become the plan of NATO countries.

West Germany had a cultural agreement with South Africa and this agreement specifically allowed for an exchange of scientists, an exchange which worked both ways. The Safari-I and II reactors had been built with the collaboration of two West German companies: Krupp and BBC.

In 1978 an international conference on nuclear technology was held in South Africa. Among the 165 participants were 77 from West Germany, 25 from the United States and 18 from South Africa, and smaller numbers from Japan, France, Israel, Rumania, Sweden, the United Kingdom, Spain and Brazil. The large participation from West Germany showed that country's specific interest in South Africa's nuclear development.

The West German corporation STEAG has also acted as the technological agent for UCOR in building the pilot plant for uranium enrichment. Even today components for the enrichment plant were being delivered to South Africa, though the West German Government had denied that in a booklet entitled *Facts versus Fiction*.

For example, the West German company GHHMAN was delivering the necessary compressors, which were a sensitive nuclear equipment listed in the international nuclear embargo list; the booklet said that for technical reasons those compressors could not be delivered to South Africa by the above company, yet the STEAG protocol stated that those components would be delivered. Separation elements were also being delivered by Siemens and Messerschmidt: they were the most important part of the plant and could not be produced in South Africa. A written statement of the public prosecutor of the town where these elements were produced said that they were exported to South Africa: the Government said that the statement of the public prosecutor did not refer to these specific elements but it could be proved that this was not correct. Other components being delivered by different companies included slide valves, cooling material and special

isotope measuring equipment.

Mr Geissler proposed that a list of these and other concerned West German companies should be prepared for the Organisation of African Unity, so that they could be boycotted. For it was not only in the separation plant itself but also in all the chemical and industrial activity in the nuclear field in which these West German companies were participating: extraction of uranium, conversion, electricity for the plant, specific chemical material, etc.

## 6. THE NETHERLANDS

The report for the Netherlands Anti-Apartheid Movement was given by Mr Pim Juffermans, who gave an account of attempted Dutch participation in ESCOM's Koeberg nuclear power project. In 1974 a Dutch group consisting of RSV (shipyard machinery industry), Bredero (building group) and Comprimo (engineering company), in association with General Electric (USA) and Brown-Boveri (Switzerland), submitted a tender to ESCOM. There were competitive tenders from Kraftwerk Union (Federal Republic of Germany), which is connected with Murray and Stewart in South Africa, and Framatome (French, with United States of America connections).

According to South African sources, the Dutch-US-Swiss tender was favoured for the contract. During 1975/76 the Dutch firms involved made strong representations to Parliament in order to secure the necessary export licences and financial assurances and they argued that the contract was important to help reduce unemployment in the Netherlands.

There was considerable protest by several pressure groups against Dutch nuclear cooperation with South Africa, and the Engineering Union decided not to cooperate with the construction of the nuclear boilers. The Dutch Government postponed its decision as to whether to provide export financing arrangements. Finally, in June 1975, ESCOM awarded the contract to Framatome, and the Dutch firms blamed the Government for having lost the order. According to Dutch law it was clear that an export licence would have been necessary for the export of equipment to South Africa if the contract had been placed with the Netherlands and its partners.

The Netherlands is connected through Urenco with certain West German companies involved in the Rossing uranium mine in Namibia. As a result, German companies will be getting Namibian uranium to be enriched in Almelo after 1980.

On 14 November 1978 four Dutch Anti-Apartheid organisations wrote to the Government protesting at the British and West German involvement in the Namibian uranium industry, since that uranium would be enriched at the common Urenco plants. The four organisations also pointed out that uranium contracts needed to be approved by Euratom and therefore the Dutch Government should insist that the Euratom Council of Ministers take a decision to end all Namibian uranium contracts. Moreover, the Urenco Treaty should be revised so that the provision requiring Urenco to accept any uranium offered to it for enrichment on any electricity generating plant in the member countries should not operate contrary to international duties and responsibilities of the governments.

The Dutch Government, in response to Parliamentary questions and a visit by a SWAPO delegation in November 1978, had promised an extensive investigation into the question of Namibian uranium being enriched by Urenco. The investigation is still not over.

In January 1975 Dr G F de Vries of the South African Atomic Energy Board visited the Netherlands as part of an extensive study tour of European nuclear research establishments.

In the same year Professor Kistemaker, one of the inventors

of the ultra-centrifuge process of uranium enrichment, visited South Africa under the Netherlands-South Africa Cultural Agreement, which is due to be abolished soon.

Visits of these types had taken place during other years as well.

More recently, when Professor Endt of the Laboratory of Nuclear Physics of the University of Utrecht was invited to a nuclear congress in Johannesburg, students at the University organised protests against such a visit and Professor Endt decided not to go.

On 21 August 1978 Professor Lemmer of the University of the Witwatersrand was due to visit the Kernfysisch Versneller Instituut of the University of Groningen and students organised major campaigns against it.

On 1 December 1978 Jan Smit of Potchefstroom University arrived at the Laboratory for Nuclear Physics at the University of Utrecht for a six-month study visit. Students organised a campaign to end the exchange of nuclear physicists between that university and South African institutions, which was still continuing.

There is considerable controversy in the Netherlands about nuclear energy in general but nuclear relations with South Africa involves one of the most dangerous forms of nuclear collaboration and therefore there is likely to be widespread action on this question in the near future.

## 7. OTHER COUNTRIES

The Seminar briefly took note of information on nuclear collaboration with South Africa by other countries, particularly Belgium, Israel, Japan and Switzerland.

It noted that a Belgian company had recently signed a long-term contract for the purchase of uranium from South Africa and that the Government had approved guarantees.

Israel had repeatedly denied nuclear collaboration with South Africa but there was evidence of such collaboration especially as regards scientific cooperation.

Japan is a major purchaser of South Africa's uranium.

Switzerland, one of the countries which had bidden for the contract to supply reactors for the Koeberg plant, maintained collaboration with South Africa in all fields.

## D. The question of safeguards

The Seminar held extensive discussions on safeguards.

It was noted that there were three aspects which are directly relevant to South Africa's nuclear capacity and potential:

- (a) The International Atomic Energy Authority's system of inspection which is aimed at detecting and therefore deterring diversion from peaceful uses to development of nuclear weapons. At present IAEA safeguards are applied to the Safari-I reactor as well as to the two French reactors which will receive their first fuel in 1981. The IAEA itself was merely a technical agency and for its safeguard system to be applied it was necessary for such controls to be imposed by the suppliers of nuclear equipment and fuel and accepted by the country which operates the plant.
- (b) The Nuclear Non-Proliferation Treaty, which South Africa had not signed
- (c) The ease with which South Africa had been able to secure scientific training and knowledge, as well as extensive nuclear collaboration at every level, including the transfer of sensitive technology and equipment for over two decades from the major Western Powers, despite the virtually inherent risk, through such collaboration, of making South Africa capable of developing its own nuclear explosive devices. The danger was particularly

highlighted by the development of South Africa's uranium enrichment plant which was secret and not subject to IAEA or other safeguards.

The Seminar considered the moves by the major Western powers to persuade South Africa to adhere to the NPT, and many participants expressed concern that South Africa would then be entitled to certain privileges, especially in connection with the supply of nuclear materials, technology and information. The result may well be continuation and increase of collaboration by the Western powers with South Africa. It was also alleged that the Western powers intended to provide security and other guarantees to South Africa in return for adherence to the NPT.

In this connection the representative of the African National Congress of South Africa made a statement that the ANC rejected any proposal that South Africa be asked to sign the NPT. Instead, all efforts should be directed at ending nuclear collaboration in every field with the Pretoria regime. (See summary of ANC statement in section III.C below.)

On the other hand, the view was expressed that adherence by South Africa to the NPT should not be discouraged. The NPT system, though not foolproof, would reduce the threatened danger in the next decade.

The IAEA representative pointed out that for IAEA safeguards to operate full scope safeguards or NPT adherence were essential; international safeguards can reduce the risks but it is better to have controls even if they are not totally effective.

Another expert participant held that it was not constructive to dismiss the safeguards in the case of South Africa, or totally to reject South Africa's adherence to the NPT.

Although it was not possible to have complete control, it should be recognised that the problems would become very serious when South Africa operated the two French reactors: with some control the danger could be substantially reduced.

Another expert participant pointed to the discriminatory practices of certain powers which often favoured non-members of the NPT over members, and claimed that South Africa was a case in point. It had not signed the NPT, it had withheld its uranium enrichment plant from the international safeguards system, but it had benefited from an almost unprecedented degree of nuclear assistance.

The Seminar agreed that South Africa's role as a major source of uranium facilitated its substantial nuclear collaboration with countries which did not themselves have uranium resources. This applied in the main to several Western European powers which had long-term uranium supply contracts with South Africa.

Related to this special role of South Africa was also the

fact that the United States of America, as the major source of enriched uranium for the Western countries was imposing strict controls in order to prevent nuclear proliferation. These controls could be avoided by Western European and other powers if they were able to secure enriched uranium from an alternative source. It was in this context that the development of South Africa's uranium enrichment plant, and the extensive external assistance provided for it, had to be seen.

The issue became even more complex when considered in the context of the export of reactors to various countries which refused to accept safeguard provisions. In those cases, for example, the Western European suppliers of reactors might import enriched United States/Canadian/Australian uranium, which required safeguards, for use in their own domestic power plants and use South African uranium for those importers of reactors which do not consent to safeguards. The fact that South Africa could sell its enriched uranium to such countries had been a major element in its decision to develop the enrichment plant.

In this respect it was remarkable that in view of the great danger involved in providing South Africa with the capability to develop its own enrichment plant the powers which had been directly involved in transferring the relevant technology and equipment had not applied full scope safeguards. This applied particularly to the Federal Republic of Germany.

Security Council resolution 418 of 4 November 1977 clearly stated that 'all states shall refrain from any cooperation with South Africa in the manufacture and development of nuclear weapons'. In the specific South African case it was clear that all nuclear collaboration, even though intended for peaceful purposes, would give South Africa substantial capability to develop nuclear explosive devices and therefore all such collaboration should be ended. Despite this mandatory decision of the Security Council, neither the Federal Republic of Germany nor France had imposed full scope safeguards for South Africa, which was the absolute minimum that was required.

The acquisition of an enrichment plant and technology by South Africa added immeasurably to the dangers of proliferation and at the same time provided the Pretoria regime with substantial bargaining power, which could only serve to make South Africa even more self-confident and aggressive in its defiance of the world community.

Moreover, with the capability to produce its own fissionable material without any control, it would develop nuclear explosive devices at an alarming rate and thus gravely increase its direct threat to neighbouring African States and the rest of the world.

### III. STATEMENTS AND PROPOSALS

#### A. Statement by scientists and experts

The scientists attending the Seminar stressed the need to alert the world scientific community to the implications of South Africa's nuclear plans, and presented the following joint statement:

**'We appeal to scientists and engineers to recognise their responsibility to deny, as far as lies in their power, to South African scientists and engineers, the possibility of acquiring new technologies or scientific information that could assist the furtherance of South African nuclear or other military capability. We recognise the traditions of international cooperation in science; nevertheless, the threat to world peace posed by the acquisition of nuclear**

**weapons by the racist regime of South Africa is so grave that South African scientists and engineers concerned in any way with the development of a nuclear capability should be placed in quarantine in much the same way as, before World War II, many anti-fascist scientists refused traditional international cooperation with Nazi scientists.'**

#### B. Proposals by anti-apartheid movements

The following proposals were made by the anti-apartheid movements at the Seminar, 'in the context of their support for the liberation struggle in Southern Africa and in the awareness that South Africa's activities in the nuclear field and all collaboration with South Africa in this area constitute

a great threat to world peace'.

1. The United Nations should take mandatory action, either by extending the mandatory arms embargo or by other means, to ban any nuclear cooperation with South Africa. Such action should ensure that delivery to and from South Africa of nuclear material or technology should be banned.
2. All countries should be required to make it illegal for their nationals to work in South Africa and for South Africans to work in their countries in regard to nuclear matters, so that visits would be banned, recruitment ended and training of personnel would be brought to an end.
3. Action should be taken to prevent the exchange of information and know-how by, for example, excluding South Africa from international conferences and preventing others from attending such conferences in South Africa.
4. All agreements with South Africa, such as monitoring agreements, should be brought to an end.
5. All supplies of equipment of all sorts should be prevented from being sent to nuclear facilities in South Africa.
6. All governmental and other financial assistance for the development of the South African nuclear capability should be ended.
7. Collaboration by governments and companies with South Africa in the nuclear field should be fully exposed and maximum publicity given to all available information. The United Nations should produce a list of corporations involved in any way in South Africa's nuclear build-up. There should be special emphasis on major collaborating companies, and the list should be published by the United Nations Special Committee against *Apartheid*. Short profiles on major companies which are collaborating and other relevant information should be sought from anti-*apartheid* movements.
8. The United Nations should demand from member States information on their links with South Africa in the nuclear field.
9. The United Nations should give assistance to anti-*apartheid* groups in holding investigations, seminars and conferences on collaboration by their own countries. Anti-*apartheid* groups should make this a major aspect of their work and press for parliamentary enquiries on this question in their own countries.
10. South Africa should be expelled from the International Atomic Energy Agency.

The anti-*apartheid* movements added:

'While we do not regard ourselves as competent to comment on the Non-Proliferation Treaty in any other respect, we strongly reject attempts to obtain South Africa's signature to the Treaty since we believe that this would provide a rationale for further collaboration in this field.

'We believe that the urgency of the situation is such that there should be a high level mission to collaborating countries.

'Finally, we believe that the only way in which the objectives set out above and the specific measures proposed can be realised will be when South Africa is subject to comprehensive mandatory sanctions in all spheres.'

### C. Statements by Southern African liberation movements

#### 1. SOUTH WEST AFRICA PEOPLE'S ORGANISATION (SWAPO)

The representative of SWAPO, Mr Peter Manning, said that

South Africa had never sought an international settlement in Namibia but had consistently undertaken a systematic programme aimed at installing a puppet regime to implement its own policy for Namibia. The struggle against South Africa's illegal occupation must be stepped up and international pressure must be vastly increased in order to bring about an early end to South Africa's illegal occupation.

A key element at present was the implementation of Decree No 1 on the Protection of Natural Resources of Namibia, which would not only bring an end to the theft of Namibia's uranium and other resources, but would also force most Western countries to clarify their position regarding the illegality of South Africa's position in Namibia.

#### 2. PATRIOTIC FRONT OF ZIMBABWE

The representative of the Patriotic Front of Zimbabwe (ZANU), Mr W Mangwende, said that the racist regime of South Africa was important in the geopolitics of the region and was a party to the so-called 'internal settlement' in Rhodesia. The struggling masses of Zimbabwe were committed to liberating themselves through armed struggle. The people would defeat the minority regimes in the region whether they had nuclear weapons or not.

He expressed satisfaction that the international community was at last awakening to the threat posed by the minority regimes to international peace and security. The barbarous acts of aggression against the people of Zimbabwe and the refugees in Zambia and Mozambique, and the wanton destruction of innocent lives and property in those countries showed clearly that those regimes were a grave threat to peace. There was no need to emphasise that the racist *apartheid* regime could easily use nuclear weapons as a last bid to defend minority rule in the region.

He condemned the *apartheid* regime for ignoring the call of the Organisation of African Unity to make Africa a nuclear-free zone.

#### 3. PAN AFRICANIST CONGRESS OF AZANIA (PAC)

The representative of the PAC, Mr Isaac Mafole, said that the PAC called upon all freedom-loving peoples of the world, all progressive nations and organisations, and all countries of the Third World, and workers of oppressor and exploiting nations, to join the people of South Africa in a united action of exposing, vehemently condemning and opposing the imperialist designs of the Western powers in giving nuclear weapons to racist South Africa. Their use could never be for peaceful purposes but only for the annihilation of the indigenous African majority and all those opposed to *apartheid* colonialism and its fascist war machinery.

#### 4. AFRICAN NATIONAL CONGRESS OF SOUTH AFRICA (ANC)

The representative of the ANC, Mr Yeyedwa Zungu, said that it cannot be overemphasised that South Africa, by its very political nature, posed a threat to international peace and security. But the fact that it had developed a nuclear capacity, thanks to its Western allies, aggravated the threat.

*Apartheid* as a political system had been condemned, through countless resolutions at the United Nations, the OAU and other international forums, as a crime against humanity. That placed South Africa in a unique category. However, despite these condemnatory resolutions, the *apartheid* regime had continued with its programme of repression of the black population in all spheres of human endeavour.

Secondly, the South African regime lacked the legitimacy accorded other governments by virtue of the representativeness of their peoples. There was no doubt that the South African regime did not represent the majority of the people of South Africa.

Such a regime had developed a nuclear capability partly

because the black people of South Africa, indeed of all Southern Africa, had taken up arms to rid themselves of white supremacist regimes. The defeat of Portuguese colonialism by the peoples of Mozambique and Angola had probably vindicated in their own thinking the South African regime's efforts to develop a nuclear capability.

The ANC had presented evidence that the South African regime intended to use its nuclear capability militarily. There was no doubt that the targets were primarily the people of South Africa who were struggling to liberate themselves, the neighbouring front-line African States which were themselves in the forefront of that struggle, and generally the continent of Africa as a whole that was supportive of their struggle.

The problem of South Africa's nuclear capability could not be separated from the intentions of the *apartheid* regime. The most important issue was whether such a regime should be receiving the assistance of its allies to enhance its systematic repression of the people of South Africa and be allowed to continue with its nuclear programme.

Any discussion of the relevance or otherwise of South Africa becoming a signatory to the NPT has to be placed within the following context:

1. The entire nuclearisation programme of South Africa was in direct violation of the declared policy of the OAU that Africa must be a nuclear-free zone. In this respect South Africa stood condemned, together with West Germany, France, United Kingdom, United States of America and Israel, which had deliberately assisted and collaborated with the racist regime by providing technology, technicians, equipment, know-how and finance for the development of the regime's nuclear capability.
2. The military and commercial use of nuclear energy were inseparably bound. The combination in the hands of the white minority racist regime of a nuclear capability which could, if required, be activated within days, together with the sophisticated delivery systems, constituted a grave threat to the independence of the African States. The step from nuclear blackmail to nuclear strike by the racist regime against African States actively supporting the struggle for national and social emancipation in South Africa would become an increasingly attractive option for the racists as the struggle intensified.
3. There had been a growing incorporation of transnational corporations and their subsidiaries in South Africa into the military-industrial complex and war preparations in South Africa. This had been reflected in the choice of P W Botha as Prime Minister and Minister of Defence of South Africa. That represented a strategic political shift of the regime's policy to deal with the crisis which was now increasingly being perceived as military rather than political. Spokesmen of the racist regime had themselves admitted that 'South Africa is in a state of war'.
4. The United Nations General Assembly and the international community had declared the South African racist regime illegitimate and condemned the policy of *apartheid* as a crime against humanity. They had recognised the legitimacy of the struggle by the oppressed people of South Africa for the armed seizure of power.

Within that context, the ANC believed that the issue of South Africa's becoming a member state of the NPT did not confront the real issues of a nuclear South Africa. Member-

ship in NPT would give legitimacy to the regime, enable it to continue the development of its nuclear capability and allow it to gain access to the free flow of vital technical and technological information and exchange of expertise on nuclear development. Finally, it would elevate the sinister collaboration to the level of the acceptable when, in fact, that collaboration was itself an obstacle to the elimination of *apartheid*.

He concluded that there was only one real safeguard that could guarantee that South Africa's resources would not be used for the devastation of the African continent — the destruction of the *apartheid* system itself.

#### D. Concluding statement by the Chairman

In his concluding statement the Chairman said that the discussion had shown that the Seminar was not dealing with a remote and potential danger but with a threat that existed today — because the *apartheid* regime either had or could have nuclear weapons.

Second, it was a danger which would certainly increase tremendously as South Africa acquired greater nuclear capability and expanded its uranium enrichment plant.

Third, the actions of those powers which continued nuclear collaboration with South Africa — so-called 'peaceful' collaboration — even after the disclosure of South Africa's plan to stage a nuclear explosion in the Kalahari Desert were reckless and intolerable.

Fourth, there must be not only a total cessation of all nuclear collaboration with South Africa, but also a dismantling of South Africa's nuclear plants, with the threat of collective sanctions, in order to avert a grave danger.

Referring to the discussion of safeguards and the question of South Africa's adherence to the NPT, he said that the Seminar was not concerned with the merits of the NPT as a step towards total nuclear disarmament. That Treaty should have perhaps included a provision for a total embargo against any State practising *apartheid*.

South Africa had not acceded to the NPT, so that it could continue with its nuclear programme and threaten African States. It had challenged the OAU's commitment to the denuclearisation of Africa.

Now, after South Africa's planned nuclear explosion in the Kalahari, the Western powers had come up with the proposal to persuade South Africa to accede to the NPT. The Pretoria regime had indicated that it would consider joining NPT if it was assured of supplies and technology by the Western powers. It also wanted to keep its enrichment facilities secret.

If the South African regime wanted to sign the NPT there was no move to prevent that. The Special Committee's position of principle on the illegitimacy of the *apartheid* regime and the legitimacy of the liberation movement did not change the fact that the Treaty was open for signature by South Africa.

But it must be insisted that the South African regime should not be given inducements to become a party to the NPT. It should not be offered free access to nuclear materials and technology.

Moreover, South Africa's adherence should not be regarded as an adequate reassurance. The *apartheid* regime was a criminal regime which had proved by its record that it could not be trusted.

#### IV. CONCLUSIONS AND RECOMMENDATIONS OF THE SEMINAR

The Seminar unanimously adopted the following conclusions and recommendations:

1. The Seminar expresses its grave concern over the serious and immediate threat which South Africa's nuclear capacity now presents to world peace and in particular to all African States. The threat to international peace, resulting from the policies and actions of the *apartheid* regime, has assumed new dimensions. There is now the grave danger that the *apartheid* regime, armed with nuclear weapons, may, in its desperation, unleash a major regional war which could precipitate a global confrontation.
2. This grave danger has been caused by the collaboration at various levels with the *apartheid* regime by the United States of America, the United Kingdom, France and the Federal Republic of Germany, as well as Belgium, Israel, Japan, Netherlands and Switzerland, through assistance in uranium extraction and processing, supply of nuclear equipment, transfer of technology, provision of training and exchanges of scientists. This collaboration, as well as external financial support for its nuclear programme, have encouraged the Pretoria regime in its defiance of the international community and have been an obstacle to the elimination of *apartheid*.
3. There must be an immediate end to all forms of nuclear collaboration with the Pretoria regime and effective international action taken to prevent it from pursuing its plans.
4. In the context of the nature of the Pretoria regime and its record, the Seminar rejects that any meaningful distinction can be made between 'peaceful' and 'military' nuclear collaboration with that regime. The major Western powers, which have always claimed that their 'peaceful' nuclear collaboration would not give South Africa any capability to develop nuclear explosive devices, were obliged in 1977 to warn the Pretoria regime not to proceed with its planned nuclear explosion.
5. The abhorrent *apartheid* regime is both illegitimate and criminal. It continues to increase its oppression of the black people of South Africa and is engaged in a virtual war with the great majority of the population. It has a long record of deliberate and systematic aggression against African States and persists in its defiance of international law and morality. It is prepared to go to any lengths and resort to desperate means in order to perpetuate the system of racist domination. Faced with growing internal resistance and increasing international pressure, it is relying more and more on military power and the use of violence in order to maintain the *apartheid* system.
6. In this context the threat that South Africa presents to the world when it is armed with nuclear weapons is obvious. In addition, when it develops its uranium enrichment plant, the Pretoria regime will gain substantial international bargaining power. It will use its nuclear weapon capability and its role as a major supplier of enriched uranium to blackmail the international community.
7. In view of the availability of raw uranium fuel from other sources, there is no compelling reason for governments and corporations to trade in uranium with South Africa.
8. Moreover, the natural resources of South Africa, including uranium, belong to the people of that country and not to the *apartheid* regime.
9. It is essential, therefore, that urgent action be taken to ensure, within the context of an international policy of comprehensive sanctions against South Africa, that there is no further nuclear collaboration in any form with South Africa, or financial or other assistance to its nuclear programme. The international community will have to adopt firm measures to prevent South Africa from continuing its present nuclear programme.
10. In view of the nature and record of the *apartheid* regime, no international or bilateral safeguards, including the International Atomic Energy Agency safeguard system and the system of control of the Nuclear Non-Proliferation Treaty (to which South Africa is not a party), are adequate. The Seminar rejects and denounces the moves by certain Western powers to offer to the *apartheid* regime the benefits of international nuclear collaboration, and security and other guarantees, in return for adherence to the NPT. There must be international action against the *apartheid* regime, not provision of additional benefits to that regime, which would result were South Africa to become a party to the NPT.
11. The Seminar recommends that the Security Council consider the matter urgently and adopt a mandatory decision, under Chapter VII of the Charter, to end all nuclear collaboration with South Africa, to require the dismantling of its nuclear plants and to warn the Pretoria regime that any efforts by it to continue its nuclear programme or to build a uranium enrichment plant would result in further international action, including effective collective sanctions.
12. Urgent action must be taken by the United Nations and the international community to ensure that all nuclear contracts and agreements between South Africa and other countries, such as the United States of America, the United Kingdom, France, Federal Republic of Germany, Belgium and Israel, be terminated and the supply to South Africa of nuclear equipment by these and other countries ended. Equally, the following areas of collaboration need to be ended:
  - (a) the training of, and exchanges with, South African scientists involved in the nuclear sector and the granting of visas to them
  - (b) contracts and agreements concerning uranium extraction and processing in South Africa
  - (c) the import of South African and Namibian uranium
  - (d) the reprocessing of South Africa's spent nuclear fuel, and in particular the return to it of plutonium
  - (e) all financial, economic and other forms of support for South Africa's nuclear industry or any ancillary and related industry; and
  - (f) the transfer of technology, supply of equipment and financial support for South Africa's uranium enrichment programme, including isotope separation.
13. Decree No 1 of the United Nations Council for Namibia on the Protection of the Natural Resources of Namibia should be fully enforced.

14. All countries concerned should enact effective legislation to make illegal all forms of nuclear collaboration with South Africa by corporations and institutions. There should be severe penalties for all infringements; parent companies should be held responsible for offences committed by their subsidiaries and associates operating in South Africa.

15. The Seminar urges African and other governments committed to the struggle against *apartheid* urgently to take all necessary initiatives at the United Nations, and make direct contact with the States concerned in order to achieve the above objectives.

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**LIST OF PAPERS SUBMITTED TO THE SEMINAR**

1. **United Nations Action against Nuclear Collaboration with South Africa, with special reference to action by the Special Committee against *Apartheid***  
United Nations Centre against *Apartheid*
2. **The Urgent Need for Immediate Cessation of all Nuclear Collaboration with South Africa**  
Abdul S Minty
3. **United States Policy and Nuclear Collaboration with South Africa**  
George M Houser
4. **Uranium Politics and United States Foreign Policy in Southern Africa**  
Ronald W Walters
5. **Nuclear Collaboration with South Africa: Britain's Profile**  
British Anti-*Apartheid* Movement
6. **Nuclear Collaboration with South Africa: Status and Prospects**  
Sverre Lodgaard
7. **The Nuclear Threat posed by the *Apartheid* Regime**  
African National Congress of South Africa
8. **West German-South African Technology Relations in a Policy Perspective**  
Ulrich Albrecht
9. **Assessment of the Dangers of South Africa in relation to the Dissemination, Production and Use of Nuclear Weapons**  
E H S Burhop
10. **The Support of France to the *Apartheid* Regime in the Nuclear Field**  
Albert Levy
11. **The Dutch Involvement in the Complex of South Africa**  
Stichting Anti-*Apartheid* Beweging Nederland

## **WORLD CAMPAIGN AGAINST MILITARY AND NUCLEAR COLLABORATION WITH SOUTH AFRICA**

### **Aims and Objectives**

1. To promote the widest awareness by world public opinion of the grave and increasing threat to international peace and security created by the system of apartheid in South Africa
2. To campaign for an end to all forms of military, nuclear and security collaboration with the racist regime in South Africa
3. To work for the effective implementation of the United Nations arms embargo against South Africa and to ensure that it is reinforced to encompass all forms of assistance and cooperation to the racist regime in the maintenance and strengthening of its military and police establishment and in its nuclear programme
4. To make representations to governments concerned on violations of the embargo and about any military, nuclear or security collaboration by them with South Africa
5. To cooperate with appropriate organs of the United Nations and the Organisation of African Unity on implementation of effective measures against military, nuclear and security collaboration with South Africa
6. To publicise all information concerning military and nuclear plans of the South African regime, its threat to and breaches of international peace and security, and actions by governments and organisations to end all collaboration with that regime

**The World Campaign against Military and Nuclear Collaboration with South Africa** was launched in London on 28 March 1979 at the initiative of the Anti-Apartheid Movement.

Patrons of the World Campaign include His Excellency President Julius K Nyerere and His Excellency President Sir Seretse Khama, and its Sponsors are Olof Palme, Coretta Scott King, Joan Lester MP and David Steel MP.

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