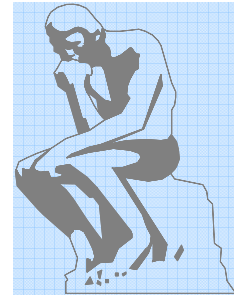


PLOWSHARE



*And they shall beat their swords into **plowshares**, and their spears into pruning hooks; nation shall not lift up sword against nation, neither shall they learn war any more ...*

Isaiah II 4 (VIIIth century B.C.)

Here, then, is the problem that we present to you, stark and dreadful and inescapable: Shall we put an end to the human race, or shall mankind renounce war?

Russell-Einstein Manifesto (1955)

*Each of the Parties to the Treaty undertakes to pursue negotiations **in good faith** on effective measures relating to cessation of the nuclear arms race at an early date, to nuclear disarmament and on a treaty on **general and complete disarmament** under strict and effective international control.*

Article VI – Nuclear Nonproliferation Treaty (1968)

N° 49 – October 2007

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Editorial¹

I have some very good friends among the ecologists; I fully respect their opinions, and I admire their constant efforts to keep our planet in a livable environment. It is now forty-five years since Rachel Carson's *Silent Spring*, and the movement it initiated has gained such impetus that it may no longer be ignored.

What I do wish, however, is for them to assume a more scientific attitude, instead of relying on hearsay, half-formed opinions, and popular misconceptions; as Josh Billings once said: "*The problem is, that so many people know things that ain't so*".

Instead of looking carefully at the scientific evidence, and on the base of an otherwise unproved "*principle of security*" - which means looking at the con's and not the pro's -, they oppose power lines, cellular phones, GMO's, stem cell research, nuclear power production, and what not. The real problems are not there; they lie in Third World poverty

¹ **Note:** This bi-monthly information sheet is distributed, free of charge and strictly by e-mail, to a select list of addressees. To be included in (or excluded from) the mailing list, just send an e-mail to mechelynck@compuserve.com; information contained in this publication may be freely reproduced and distributed, with mention of the source; comments are welcome (see Appendix 2).

and disease, water and energy supply, mutual incomprehension between people who happen to differ in skin colour, language, costume, religious affiliation or simply parentage; they lie in the Western nations' fight to assume superiority in economics, fighting power and World domination.

I would like my ecologist friends to suggest positive solutions, instead of raising up problems that are minor or even do not exist. I take my hat off to those courageous and inspired pilgrims, who devote their time and energy to build water supply systems, to provide agricultural knowledge, to develop local resources in the most desolate parts of our planet.

As the King of Brobdignag said, in Swift's *Gulliver Travels*: "He who has made two blades of grass grow where there was only one, or two ears of corn where there was only one, will have better served humanity than all the philosophers put together"¹

Climate Change

2007 Nobel Peace Prize

The 2007 Nobel Peace Prize has been awarded to Al Gore, in recognition of his efforts in the climate change field.

Weapons of Mass Destruction

Dear friends,

Please find here a short report of a historic and inspiring initiative launched by the Italian Mayors of Aviano and Ghedi. A very significant event, as Aviano and Ghedi are the two Italian cities where US nuclear weapons are stationed.

This initiative by a large coalition of Italian NGO's is one the best things that can happen within the "*Abolition 2000 Europe*" campaign to withdraw US nuclear weapons from Europe. A very timely initiative, as pressure on NATO is increasing in several other member states (Belgium, Germany, Netherlands, Norway, Turkey, ...) to withdraw US nukes and discuss the future of NATO's nuclear policy. Mayor Tadatoshi Akiba, President of "*Mayors for Peace*" mailed a letter to the Italian membership (248 members) in support of this initiative. Special thanks to Lisa Clark for her hard work and the report.

Kind regards,

Pol

Mayors of Aviano & Ghedi launch campaign for Italian NWFZ²

On October 1st, 200 people gathered on the main square of the Italian town of Ghedi, to launch a new campaign to declare Italy a NWFZ through a legal initiative. The Mayors of Aviano, Castenedolo and Ghedi were the first to sign the new law proposal declaring Italy a nuclear-weapon-free country. A very significant event, as Aviano and Ghedi are the two Italian cities where US nuclear weapons are stationed.

This event marked the start of a important national campaign where Italian Mayors and a broad coalition of civil society groups need to collect 50,000 signatures for the proposal

¹ Quoted from memory, with all due apology !

² Sent in by Pol, Mayors for Peace 2020 Vision Campaign, International Secretariat

to be discussed in the Italian parliament. Last week Mayor Tadatoshi Akiba, the Mayor of Hiroshima and President of the Mayors for Peace, invited all Italian member cities to support this historic initiative.

The meeting took place in the main square of Ghedi, a small town just outside Brescia, around a coloured tent - red-white-and-green for Italy - and beautifully decorated with the Campaign logo, "*Un futuro senza atomiche*" -- "*a nuclear-weapon free future.*"

Several representatives of local Committees in support of the Italian Campaign came from other cities in Northern Italy: Milan, Cremona, Mantova, Trento, Bolzano, just to name a few. Also present were representatives of the major NGOs that make up the Promoters' Committee.

The national Coordinator of "*Pax Christi Italy*", don Fabio Corazzina, asked everyone to help spread the word. The President of "*Beati i costruttori di pace*" (*Blessed Are the Peacemakers*) announced that a national organizing Secretariat was established in the organization's headquarters in Padova.

Exerpts from a letter sent by Mayor Akiba to all Italian members of Mayors for Peace were also read out, to urge all groups present to seek the support and collaboration of Mayors and City administrations in the signature drive.

On October 2nd, recently declared Nonviolence Day by the United Nations, signature collection was begun in several other Italian cities, including Turin, Milan, Trieste, Padova. In Rome the first signatures will be collected at a conference hosted by the Province of Rome on Thursday October 4th: one of the focusses of the conference will be Nuclear Disarmament.

In Ghedi, on the morning of September 30th, the two Mayors of Ghedi and Aviano spoke briefly to the people gathered, stressing their commitment to a world free of nuclear weapons. "We shall start from Italy," they said. "I refuse to accept that the citizens of our community can be defended by nuclear weapons," stated Stefano Del Cont, Mayor of Aviano.

Joined by another Italian Mayor for Peace, Giuliano Salomoni of Castenedolo, the three Mayors were the first to sign the proposed Law declaring Italy a nuclear-weapons-free country. All the other people present signed after them.

The next big event is the Perugia to Assisi Peace March, on October 7th, where the colourful tent donated by Shigeo-san will be manned by volunteers delivering the Campaign materials to all local Committees who need signature forms and posters to activate signature collection in their own cities.

More information on

<http://www.unfuturosenzatatomiche.org/>
<http://www.2020visioncampaign.org/pages/284/>

High resolution pictures on the website:

<http://www.2020visioncampaign.org/pages/287>

Mayors for Peace 2020 Vision Campaign, International Secretariat
City Hall, Grote Markt 34, B-8900 Ypres, BELGIUM

Phone: +32-57-38 89 57

Fax: +32-57-23 92 76

E-mail: pol@2020visioncampaign.org

Website: 2020visioncampaign.org

Nuclear progress means peace regress

Jimmy CARTER

How can we oppose the development of nuclear weapons by more nations, while those that already own them refuse to put limits on their own arsenals? (AP, September 13th, 2007)¹

By turning their back on most of the nuclear agreements negotiated in the course of the last fifty years, the US are sending a contradictory message to North Korea, Iran, and the other nations possessing the necessary knowledge to manufacture nuclear weapons. The Indian proposals only add to the confusion and further undercut the worldwide peace pact represented by the Nuclear Non-Proliferation Treaty (NPT).

At the same time, nothing is done to decrease the world arsenal of about 30 000 nuclear weapons held by the US, Russia, France, the UK, China, India, Pakistan, Israel, and perhaps North Korea. This lack of judgment means that a universal nuclear holocaust is just as possible today as it was in the worst moments of the Cold War

The NPT is the essential pact between the five Nuclear Weapon States and the more than 180 other nations; its major objective is stated in Article VI:

*Each of the Parties to the Treaty undertakes to pursue negotiations **in good faith** on effective measures relating to cessation of the nuclear arms race at an early date, to nuclear disarmament and on a treaty on **general and complete disarmament** under strict and effective international control.*

At the 2005 five-yearly UN Review Conference, four countries were absent: India, Pakistan, Israël and North Korea, the first four having an already well-developed nuclear arsenal and the fifth at least an embryo.

The US Government did not lead in the good direction: it has already retired from the Anti-Ballistic Missile Treaty, which provided for a limitation on nuclear and new weapon systems testing; it has given up a long-term policy about the threat of "first-use" utilization of nuclear weapons against non-nuclear States. These recent decisions by the US have encouraged China, Russia and other NPT signatories to adopt similar postures

Since 1974, the other American Presidents, as well as myself, have been conscious of India's nuclear ambitions; we have imposed a coherent policy, forbidding the sale of nuclear materials and technology to India or to any other country refusing to adhere to the NPT. As of this day, it appears that this policy might be given up.

I entertain no doubt that India's political leaders are just as competent in the management of their country's nuclear arsenal as those of the five initial nuclear powers. There is, however, an important difference: these latter have adhered to the NPT and have put an end to the production of weapon-grade nuclear materials.

Indian leaders should take the same commitments, and, as the other nuclear powers have done, adhere to the Comprehensive Test Ban Treaty (CTBT). Instead, they claim unlimited access to international aid, so as to manufacture enough nuclear fissile material for the production of fifty warheads per year, much more than their estimated current capacity.

If India's request was accepted, why would other technologically competent NPT signatories, such as Brasil, Egypt, Saudi Arabia or Japan - without mentioning less responsible countries - continue limiting themselves?

¹ Origin: <http://www.lalibre.be> ; retranslated from the French by Plowshare, with apologies for differences with the original.

Even if their policy has been timidly approved by the US, India remains faced with two obstacles: one is to strike an acceptable agreement with the International Atomic Energy Agency (IAEA); the other is to obtain an exemption from the Nuclear Suppliers Group (NSG), a 45-nation consortium banning nuclear trade with countries refusing to accept international nuclear standards¹.

The non-nuclear weapon members of this group are: Argentina, Australia, Austria, Belarus, Belgium, Brasil, Bulgaria, Canada, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, Germany, Greece, Hungary, Ireland, Italy, Japan, Kazakistan, Lettonia, Lituania, Luxemburg, Malta, the Netherlands, New Zealand, Norway, Poland, Portugal, Rumania, Slovakia, Slovenia, South Africa, South Korea, Spain, Sweden, Switzerland, Turkey and Ukraine.

The role of these nations, and of the IAEA, is not to prevent India from developing its nuclear power programme, nor even to prevent it from manufacturing nuclear weapons, but to ensure that it follows the lead of other responsible countries, in adhering to the NPT and accepting reasonable safeguards.

It is of the essence that the nuclear-weapon powers lead the way in restricting their action and avoiding NPT transgressions. Any action they undertake today will influence the future - either peacefully or murderously.

New Zealand calls for action on operational status of nuclear weapons

A speech from New Zealand's Disarmament and Arms Control Minister Phil Goff.
(<http://www.beehive.govt.nz/ViewDocument.aspx?DocumentID=30489>)

New Zealand will lead a call at the United Nations General Assembly this year for nuclear states to draw back their nuclear weapons from immediate launch readiness.

Thousands of nuclear weapons currently are on high-alert status, ready for instant launch. This presents a major threat to global security.

Nuclear weapon systems at a high level of readiness increase the risk of these weapons being used, including unintentionally or by accident. Such an eventuality would have catastrophic consequences.

Steps need to be taken to reduce this risk. New Zealand has played a leading role through its participation in the New Agenda Coalition in pushing for disarmament and non-proliferation. This new initiative is consistent with that role.

New Zealand, together with like minded states including Sweden, will promote a resolution at the UN General Assembly this year calling on nuclear weapon states to take steps to lower the operational status of their nuclear weapons.

New Zealand looks forward to others' support, including nuclear weapon states.

We call on States with nuclear weapons to take mutual action to remove all nuclear weapons from launch-on-warning status.

We urge all States with nuclear weapons to take steps to decrease the operational readiness of their nuclear arsenals. Such steps could include the separation of warheads from delivery mechanisms and the separation of arsenal storage from potential deployment locations.

¹ Including IAEA inspection of their **whole** territory.

From: Alyn Ware, Director, Aotearoa Lawyers for Peace
PO Box 24-429, Manners Street
Wellington, Aotearoa-New Zealand
Tel: +64 4 496-9629 or +64 4 385-8192 Fax: +64 4 385-8193
Cell 021 2603727 (New Zealand)
alyn@lcnp.org
www.peacelaw.org.nz

News from our readers¹

Physical Limits to Large Scale Global Biomass Generation for Replacing Fossil Fuels²

Helmut Burkhardt, Professor of Physics Emeritus, Ryerson University, Toronto
burkhard@ryerson.ca

A Paper presented at the Round Table on Forestry September 22, 2006, organized by the Faculty of Forestry at the University of Toronto, and Science for Peace.

Abstract

In a coarse grain global analysis the average total power used by humans is given, and compared with total solar insolation on land. The theoretically possible and the actual overall efficiency of the conversion of solar energy by technical and biological means is determined. The resulting limitations of biomass energy for replacing fossil fuels are considered. Other problems of energy farming are analyzed. Conclusions are drawn, and future energy policies are recommended.

Introduction

There is a worldwide trend to switch from fossil fuels to biomass energy. While it may be useful to use biomass waste and energy farming in some locations, the large scale use of biomass to replace of fossil fuels is problematic and needs careful analysis. The first step is to see what the energy needs of humankind are.

Average Total Power Consumption

Humankind's total primary energy consumption is some 470 EJ/a [1], which translates into an average total power of some 15 TW. With a world population of 6.5 billion people [2], the average total power use is at present 2300 W per person.

Total energy use of countries can be derived from the same sources, or from [3]. Canada for example uses 14.3 EJ/a, which translates into average power of 0.46 TW, or 14 kW/person. By comparison, Niger's total energy use is 0.017 EJ/a. which translates into an average power consumption of 43 W/person.

The power consumption by sector is approximately 33% of total power each for industry and commerce, households, and transportation; in *per capita* terms, the average world citizen consumes 800 W for each sector: production/trade, residential, and transportation.

Electricity is practical in many applications, and hence an essential part of total power in each sector. The average electric power used is according to the US Energy Information Administration [4]: global average 300 W/person, in Canada 2000 W/person, and in Niger 2 W/person.

¹ Publication of any contribution does not imply that we endorse or even agree with the author's opinions, which remain his **responsibility**. In the latter case, we reserve the right to append a comment or, if we deem fit, a rebuttal (see Appendix 2.).

² Plowshare does not fully agree with Prof. Burkhardt's conclusions - it believes that **all** alternate ways to displace carbon-based fuels as energy suppliers should be pursued - but the article provides essential data and is worth studying.

The composition of the world's primary energy can be found on a University of Michigan website [5]. It is in approximate numbers:

Oil	36%	5.4 TW	830 W/person
Coal	23%	3.9 TW	630 W/person
Natural gas	20%	3.0 TW	460 W/person
Nuclear	7%	1.1TW	160 W/person
Hydro	2%	0.3 TW	46 W/person
Biomass and wastes	11%	1.7 TW	254 W/person
Solar wind geothermal	1%	0.1 TW	15 W/person

Fossil fuels supply at present the bulk of world energy; as their availability is limited, and as their use contributes to global warming, they need to be replaced. Nuclear energy has problems of its own, and should also be replaced by more benign technology based on solar energy.

Insolation: the Physical Base of Green Energy

The solar constant at the Earth's orbit is 1370 W/m² perpendicular to the solar rays. 30 % is reflected back into space. Thus, the Earth receives 960 W/m² of its cross section (1.27 *10¹⁴ m²), which is a total insolation available at the Earth's surface of 1.22*10¹⁷ W, or 19 MW/person for the present world population; solar energy received at the Earth's surface is some 10 000 times more than humans are presently using from other resources.

Distributed over the surface of the sphere, which is 4 times the cross section, insolation yields a day and night global average of 240 W/m² on the surface. Equatorial regions get some 400 W/m², while the inhabited regions in higher latitudes will receive around 200 W/m² on a horizontal surface [6]. Using the global average insolation, 10 m²/person of horizontal surface receive the amount of energy presently used by humans on a global average.

Technical Solar Energy Conversion

The collection area required to satisfy human energy needs depends on the efficiency of the collection method. Solar cells reach efficiencies greater than 20% [7], producing on average some 50 W/m² of electrical power. Electrical energy can supply both, the electricity proper, and transportation. Therefore, in order to supply 300 W/person electrical power consumption and 800 W/person in transportation needs, some 22 m²/person of solar cell collectors are required.

The global average need for thermal power is 1200 W/person; this is determined by subtracting electrical power and the power for transport from the total power. The achievable solar thermal efficiency is above 60% [8], which delivers on average 145 W/m² of thermal power. Therefore, the direct use of solar thermal power requires a collector surface of approximately 8.3 m²/person.

In total, technical collection of all of humankind's present energy needs requires solar collector area of some 30 m²/person on buildings or on dry land. By contrast, biomass conversion of solar energy is less efficient, and requires water, fertilizers, and biologically productive land.

Biomass Energy Generation in Theory and Practice

The central part of the solar spectrum is photosynthetically active radiation. Only 45% of solar radiation energy is carried by this part of the spectrum. A further reduction of biological solar energy conversion efficiency is due to the fact that some of the qualified photons absorbed by the plant fail to perform photosynthesis; the quantum efficiency is given as 25%, which reduces the conversion efficiency to 11%. In addition, some of the solar radiation is reflected, and photosynthesis requires respiration which requires en-

ergy. Thus, a realistic expectation for the efficiency by which solar radiation energy can be converted into biomass energy is 3% to 6% [9]. This theoretical efficiency is 10 times lower than the technical conversion efficiency. Hence some **300 m²/person of biologically productive land is required to supply the total present energy needs of humankind**. In addition, transpiration of water is required for this photosynthesis to take place. Water needs for transpiration depend on conditions; the University of Prince Edward Island website states that between **250 g to 700 g water are needed for the photosynthesis of 1 g of dry biomass** [10].

In practice, the efficiency of biomass conversion is much less than the theory predicts. An energy crop database developed by the Oak Ridge National Laboratory [11] offers realistic yields of unirrigated switchgrass and hybrid poplar plantations. The data for Barbor, Alabama may serve as an example. The median annual yield for switch grass, planted on former cropland, is 8.6 dry tons/acre; for hybrid poplar it is 4.1 dry tons/acre. In SI units this represents an average dry matter production rate per square metre of 61 µg/s, and 29 µg/s respectively. Using a heating value of 15 kJ/g, the biomass power generation rate is 0.92 W/m² for switchgrass, and 0.44 W/m² for hybrid poplar. These values represent the energy harvested. The net overall efficiency is further reduced by the energy requirements to plant, harvest, dry, transport, process the crop into a suitable transportation fuel, and by the thermodynamic efficiency in electricity generation. In the end, the realistic overall power of biological conversion of solar energy to satisfy present human needs is less than 0.5 W/m². Therefore, replacing the 2080 W/person presently derived from fossil fuels and nuclear energy with biomass energy requires more than 4000 m²/person of biologically productive land.

Global limits to Food and Energy Crops

A study of net primary productivity and energy fixation for the world done by Lieth [12] confirms the low efficiency of biological conversion of solar energy; only tropical rainforests and wetlands generate biomass energy at a rate of 1 W/m²; other forms of vegetation have lower yields.

According to Lieth 1.4*10¹³ m² of land world wide is cultivated or used for permanent crops; this amounts to 2150 m²/person. The land used world wide for agriculture produces biomass energy at a rate 0.36 W/m², or 774 W/person. Systematic utilization of agricultural waste and byproducts of the food system can contribute a few hundred watts per person to the total power consumption. However, to supply the remaining present energy needs from biomass is physically not feasible, as it requires additional 4000 m²/person of biologically productive land, which is not available on Planet Earth.

There are other reasons that prevent the large scale use of biomass for oil replacement. Energy farming is in direct competition with food production for land, for water, and for fertilizer. It is no secret that humankind is already struggling to eliminate hunger; therefore, to take land, water, and fertilizers away from food production is, in a global perspective, not an option. For example, to run one SUV on ethanol would require an amount of grain sufficient to feed 26 people, according to Lester Brown [13].

Furthermore, energy farming, like agriculture, is an enemy of biodiversity. Any land taken away from wilderness destroys habitat and contributes to the mass extinction of species. However, this will inevitably happen with increasing use of biomass fuels. Indonesia is planning to cut down rainforests in order to supply more palm oil [14]. Brazil threatens the Amazon rain forest by exporting ethanol from sugarcane, and soya based diesel fuel [15].

The problems of large scale global use of biomass can be visualized by comparing it with food energy. A person needs some 100 W of food energy -- some 2000 Cal/day. Feeding the present world energy system with biomass power of 2300 W/person is equivalent to feeding an additional 23 'energy slaves' for each person; it is quite obvious that a

healthy World ecosystem cannot spare sufficient biomass production capacity to feed the equivalent of 156 Billion human beings.

Conclusions

The replacement of fossil fuels and nuclear energy in the present world energy system by direct technical conversion of solar energy requires some 30 m²/person of solar collectors, and is technically feasible. Due to the lower efficiency of biological collection of solar energy the land area needed for bulk replacement of fossil and nuclear energy is 4000 m²/person; this is not feasible due to several reasons. There is a global shortage of biologically productive land, water, and fertilizer; furthermore, energy farming is in direct competition with food production, and contributes to further reduction of biodiversity in the Earth's ecosystem.

Policy Recommendations to Governments Worldwide

- Limit biomass energy to waste utilization, and discourage energy farming
- Implement the Contraction and Convergence Principle, as suggested by the Kyoto Agreement, for the sake of global energy justice
- Prevent further growth of total power consumption by managing world population, and power consumption per person through improved efficiency
- Place highest priority on research, development, and large scale implementation of technical solar energy conversion

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The Us-India deal

Questions in the Dutch Parliament, by Member van Velzen, and answers by the Minister of Foreign Affairs, August 13th and 27th, 2007 -

Ref.: (in Dutch)

<http://www.minbuza.nl/nl/actueel/brievenparlement,2007/08/Beantwoording-vragen-lid-Van-Velzen-over-een-nucle.html>

Sent in by K.Koster, k.koster@inter.nl.net

eu-abolition2000@lists.riseup.net

1. Have you noted the 'Agreement for cooperation between the government of the United States of America and the government of India concerning peaceful uses of nuclear energy (123 agreement)'? 1) If so, do you agree that this treaty makes no mention of the return of the nuclear material and equipment as described in the treaty? If not, why not?
2. Do you agree that this treaty provides for the forming of a strategic reserve of nuclear fuel? If so, do you agree that this would strongly reduce the possibility of directed sanctions against the Indian nuclear programme if nuclear tests take place or IAEA rules (International Atomic Energy Agency) are violated? If not, why not?

Answer: Yes, I have noted the 'Agreement for cooperation between the government of the United States of America and the government of India concerning peaceful uses of nuclear energy'. Neither the details of the negotiations between the United States and India, nor the motivations which led to the final negotiated result, are known to me. A number of stipulations in the treaty, including those dealing with the termination of the treaty and the acquisition of nuclear fuel, is not clear as of this moment. Further explanation by the treaty parties involved is necessary for a complete understanding of the treaty. After that a comprehensive analysis of the treaty in question can be made.

3. Do you agree that delivery of nuclear fuel to India for civilian purposes will allow the country to free its own limited supplies for its nuclear weapons programme? If not, can you explain why not? If yes, how do you evaluate this?

Answer: Yes, I am also of the opinion that the delivery of nuclear fuel (and uranium) for civil purposes will allow India to free its own limited uranium stockpile for the production of fissile materials for the nuclear weapons programme. As was pointed out by my predecessor in his letter of 5 July 2006 (parliamentary ref 21 501-02, nr. 692), this is a matter of concern for the Netherlands, which has in diplomatic contacts with India and the United States repeatedly stated our preference for India to declare a moratorium on the production of fissile materials for explosive purposes. India in turn has repeatedly informed us that it is not planning to declare a unilateral moratorium, but that it is prepared to work in a multilateral framework on the realisation of a fissile materials cut-off treaty. This fact forms an extra encouragement for the Netherlands to continue its efforts for the initiation of negotiations on such a treaty.

4. Do you agree that the so-called 123 Agreement undermines the Non-Proliferation Treaty? If not, why not? Do you furthermore agree with me that by making India

an exception this treaty undermines any position taken regarding any other (possible) proliferating states?

5. Do you agree that this treaty contradicts statements by the head of the IAEA Al Baradei, declaring that states with nuclear weapons must take ongoing disarmament steps, permanently end nuclear testing subject to the law, as well as cease production of nuclear material for weapons?

Answer: As stated in my reply to questions 1 and 2, I am not as of this moment able to make a comprehensive analysis of the treaty. Furthermore a fullscope safeguards agreement still to be agreed on between India and the IAEA will form a crucial part of the nuclear arrangements between the US and India. An analysis of the treaty and the fullscope safeguards agreement is necessary in order to give a comprehensive evaluation of the possible effects of the civil nuclear cooperation between India and the US.

In general the position taken in relation to nuclear weapons states and (possible) proliferating states is evaluated on a case by case basis, taking into account the specific merits.

6. Do you agree that the guidelines of the Nuclear Suppliers Group (NSG) imply that trade with countries which do not allow security inspections by the IAEA, is illegal? If so, do you agree with me that the present NSG guidelines prevent implementation of the US-India treaty being referred to? If not, why not? If yes, can you indicate how the Netherlands will react to an (American) proposal to adjust the NSG guidelines in such a way that implementation of the treaty would no longer violate the guidelines?

Answer: The NSG guidelines determine that for deliveries of sensitive nuclear goods and technologies (the 'Trigger List') to non-nuclear weapons states to take place, the receiving country must have signed a fullscope safeguards agreement with the IAEA, that is to say, it must allow IAEA inspections on all of its territory. For the delivery of nuclear-related dual use materials and technologies this strict rule does not apply.

Answer: Since India is not an official nuclear weapons state and has not signed a fullscope safeguards agreements with the IAEA, the treaty in question can indeed not be implemented without adjustment of the present NSG guidelines.

As was already stated by my predecessor in his letter of 19 April 2006 (parliamentary ref 21 502-02, nr.681), the planned civil nuclear cooperation with India contains positive elements, such as the further embedment of India in the global non-proliferation system and the subjection of a significant part of its nuclear activities to IAEA supervision. The nuclear agreement also meets part of the fast-growing Indian energy needs, without using fossil fuels. That is why the Netherlands is prepared to take a positive position in the NSG, when possible American proposals to adjust the NSG guidelines, are discussed. Our point of departure is that the decision to be taken must be in accordance with our non-proliferation commitments.

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Document IAEA INFCIRC/254/Part 1
Document IAEA INFCIRC/254/Part 2

Mayors for Peace

Hiroshima - Ypres, August 31st 2007 - Since July 30th Mayors for Peace welcomed 34 new member cities and municipalities. On August 30th the Conference involves 1,732 cities in 122 countries and regions around the world.

The latest member cities are from Argentine (1), Australia (1), Belgium (1), Canada (1), Cyprus (1), Czech Republic (4), Iran (1), Iraq (9), Italy (2), Poland (1), Portugal (2) and US (10). New membership forms are being received almost every day at the secretariat of Mayors for Peace in Hiroshima.

New members are the mayors from General San Martin (Argentine), Launceston (Australia), Maarkedal (Belgium), Brampton (Canada), Kyrenia (Cyprus), Jince, Rozmitál pod Tremsinem, Stitov and Trokavec (Czech Republic), Kermanshah (Iran), Abu-Garak and Ali-Hill, Alhartha, Ali-Algharbe, Ali-Alsharqi, Alkawther, Al-Kumait, Alqaseem, Amarah and Saddah (Iraq), Cervia and Sant' Agata Bolognese (Italy), Trzebinia (Poland), Câmara de Lobos and Mértola (Portugal), Brooklyn (OH), Coral Springs (FL), Dayton (OH), Des Moines (IA), Fayetteville (AK), Hallandale Beach (FL), Normal (IL), Oakland (CA), Oak Park (IL) and Pleasanton (CA) all in the USA.

Capacity building

Mayors for Peace aims to continue to expand its capacity by attracting new members and deepen its relationship with the members. We aim to have 2,020 members by the end of 2007 in as many countries as possible.

Following strategic discussions in Hiroshima last week we are especially interested to expand our capacity in the nuclear weapon states: Britain, China, France, India, Israel, Pakistan, Russia and US. Of course also the NATO member-states and mayors in Nuclear Weapon Free Zones will be asked to endorse the call to have the world free of nuclear weapons by 2020.

We will need the help of the NGO community to make this happen. Please don't hesitate to get back to us if you can assist as. We attach the registration form for Mayors. Let us know if you need a recruitment letter from mayor Tadatoshi Akiba to your mayor(s).

Warm regards,

Pol D'Huyvetter
Executive Advisor
Hiroshima Peace Culture Foundation

Mayors for Peace 2020 Vision Campaign
International Secretariat
City Hall, Grote Markt 34, B-8900 Ypres, BELGIUM
Phone: +32-57-38 89 57
E-mail: 2020visioncampaign@ieper.be
Website: 2020visioncampaign.org

Some thoughts for today

A True Story

The passengers are boarding a transatlantic flight; a well-dressed woman hesitates, in apparent distress.

- What is your problem, Madam?, asks the hostess.
- Can't you see? I am seated next to a black man! I couldn't bear to sit next to one of these uncouth people! Give me another seat!
- Please calm down, Madam; this flight is nearly full; I will go and see if there is another seat available.

She is back a few minutes later.

- It is as I thought, Madam. There is no other available seat in Economy; I have talked to the captain, and he has confirmed that Business is also full. However, there is some room left in First...

And before the lady has time to comment, the hostess goes on:

- It is absolutely not our company policy to allow an Economy passenger to sit in First; but, in view of the circumstances, the captain agrees that it would be inadmissible to oblige somebody to sit next to such an uncouth person...

Then turning to the man:

- Thus, Sir, if you agree, please take up your hand luggage and follow me; a First Class seat is expecting you.

And the surrounding passengers stand up and cheer!

Appendix 1 - The Pugwash Conferences

Nobel Peace Prize 1995 (jointly with Prof. Sir Joseph Rotblat †)

Washington DC (USA) Office:

11 Dupont Circle, NW Suite 900
Washington, DC 20036
pugwashdc@aol.com
<http://www.pugwash.org>

Canadian Pugwash Group

<http://www.pugwashgroup.ca>

Russian Pugwash Group

44, korp. 2, Vavilova ul., Moscow
119333, Russian Federation
Tel/fax ++7-495-135-52-79
mlebedev@pugwash.ru
<http://www.pugwash.ru>
<http://www.ifpc.ru>

Student Pugwash:

<http://www.student-pugwash.org/>

Netherlands information exchange centre:

pugwash@antenna.nl

Mexican Pugwash Group

<http://www.pugwashmexico.org>

South Korean Pugwash Group

<http://www.pugwash.or.kr>

Swedish Pugwash Group

<http://www.pugwash.se>

London (UK) Office

Flat A Museum Mansions
63A Great Russell Street
London WC1B 3BJ
pugwash@mac.com

Rome (Italy) Office

Accademia Nazionale dei Lincei
Via della Lungara 10
I-00165 Roma
pugwash@iol.it

GIPRI (Geneva):

<http://www.gipri.ch>

Belgium:

c/o André L. Mechelynck
Koxberg 25
B-3040 Huldenberg (Belgium)
mechelynck@compuserve.com

Pugwashnet

pugwashnet@lists.pugwash.org

Appendix 2 - Notes for Contributors

All contributions are welcome, under the following provisos:

- Contributions may be submitted to

e-mail: mechelynck@compuserve.com (preferably)

or

Fax: +32.2.687.31.57

Any of the following **languages** may be used: English (UK or US), French, German, Dutch, Spanish or Portuguese; *Plowshare* will take care of the English¹ translation, unless the writer insists on retaining the original language; in such cases, an English summary will be appended.

- If you do **not** wish your letter to be published, please mark it clearly "**Private, not for publication**".
- All contributions should include the **name** and the **address** (or at least the **e-mail**) of the sender. The name will be published, except on special request, duly justified; it will, however, be communicated to the proper legal instances should we be so obligated. Anonymous communications will not be accepted.
- Publication of any contribution does not imply that we endorse or even agree with the author's opinions, which remain his **responsibility**. In the latter case, we reserve the right to append a comment or, if we deem fit, a rebuttal.
- In the Pugwash spirit, **criticisms** and **corrections** of our statements and opinions are **welcome**, as well as suggestions for future items; we reserve the right, however, not to publish any contribution that we consider as having an aggressive, insulting, obnoxious, indecent, racist, xenophobic or irrelevant character.
- We also reserve the right to **condense**, summarise or excerpt any contribution that we consider too long or repetitive; we formally commit ourselves to respect in every way the intention of the author; if we deem it necessary, we shall obtain his agreement on our summary before publication. In any case, we shall, if available, provide the address from which interested readers may obtain further information.

The Editor

¹ For the sake of uniformity, we are trying to use the standard UK spelling throughout, amending, if necessary, the texts submitted by our correspondents.