

G7/8 Conclusions on Energy, 1975–2017

John Kirton, Laura Sunderland, Tatiana Khanberg, Zaria Shaw, Maria Marchyshyn and Brittaney Warren, 2015-2017

Updated by Brittaney Warren, G7 Research Group, January 5, 2018

Year	# Words	% Total Words	# Paragraphs	% Total Paragraphs	# Documents	% Total Documents	# Dedicated Documents
1975	193	17	4	26.6	1	100	0
1976	30	1.8	1	4	1	100	0
1977	614	23	13	33.3	1	50	0
1978	643	21.4	14	28.5	1	100	0
1979	1309	62.2	26	76.4	1	50	0
1980	1742	43.5	24	40	1	20	0
1981	466	14.7	11	21.1	1	33.3	0
1982	163	9	2	10	1	50	0
1983	186	8.6	4	10.8	2	100	0
1984	156	4.7	2	4.0	1	20	0
1985	0	0	0	0	0	0	0
1986	521	14.5	7	21.8	2	50	1
1987	59	1.1	2	2.7	2	28.5	0
1988	0	0	0	0	0	0	0
1989	295	4.1	6	5	1	9	0
1990	334	4.3	4	3.2	1	25	0
1991	702	8.6	12	21.4	1	20	0
1992	496	6.5	9	5.3	1	25	0
1993	186	5.4	2	4.7	1	33.3	0
1994	325	7.8	8	11.7	1	50	0
1995	242	3.3	3	2.2	1	33.3	0
1996	411	2.6	4	1.7	2	50	0
1997	365	2.8	5	3.5	1	20	0
1998	356	5.8	5	7.8	1	25	0
1999	641	6.3	6	6.9	1	33.3	0
2000	444	3.2	7	4.8	2	40	0
2001	272	4.3	3	4.1	1	14.2	0
2002	43	0.35	1	0.68	1	12.5	0
2003	209	1.2	4	2.3	1	7.6	0
2004	68	0.17	1	0.29	1	4.7	0
2005	567	2.5	9	4.2	2	10	1
2006	5984	19.4	74	30.2	3	17.6	1
2007	1563	6.0	12	4.3	4	33.3	0
2008	2104	12.4	22	12.6	1	9	0
2009	6333	38.2	57	17.3	8	61.5	1
2010	787	11	4	7.5	1	50	0
2011	1701	11.2	20	10.8	2	66.6	0
2012	2469	22.3	46	24.7	3	50	2
2013	586	4.3	5	2	1	25	0
2014	1063	20.8	20	28.2	1	100	0
2015	1688	13.3	18	7.3	1	50	0
2016	1818	7.9	13	2.9	2	28.6	0
2017	386	4.5	3	1.9	2	50	0
Average	895.8	10.7	11.5	12.1	1.5	37.9	0.1

Notes:

Data are drawn from all official English-language documents released by the G8 leaders as a group. Charts are excluded.

"# of Words" is the number of energy-related subjects for the year specified, excluding document titles and references. Words are calculated by paragraph because the paragraph is the unit of analysis.

"% of Total Words" refers to the total number of words in all documents for the year specified.

"# of Paragraphs" is the number of paragraphs containing references to energy for the year specified. Each point is recorded as a separate paragraph.

"% of Total Paragraphs" refers to the total number of paragraphs in all documents for the year specified.

"# of Documents" is the number of documents that contain energy-related subjects and excludes dedicated documents.

"% of Total Documents" refers to the total number of documents for the year specified.

"# of Dedicated Documents" is the number of documents for the year that contain a energy-related subject in the title.

Introduction

This report catalogues all conclusions in official G8 documents related to the issue area of energy. It refers to all official statements and annexes released by the leaders, as a group, at each annual G8 summit from 1975 to 2013.

Definition of Issue Area

As an issue area within the G8, energy consists primarily of four component areas. By far the earliest, most ample and frequent is the supply and price of traditional energy sources such as oil, natural gas, coal and nuclear power. A close companion is alternative and renewable energy sources, and another component is more demand-side measures such as energy efficiency and conservation. Another is energy trade, including Soviet gas trade with Europe and Japan and Russia's energy pricing policies as part of its quest for accession to the World Trade Organization (WTO). The definition includes all energy-related terms such as energy markets and energy mix, as well as energy-related forums such as the International Energy Agency and the Organization of Petroleum Exporting Countries (OPEC). It also includes energy-related projects endorsed by the G8 leaders, such as the Joint Oil Data Initiative (JODI) and the St. Petersburg Global Energy Security Principles.

Search Terms

The following keywords were used for this report.

Inclusions

Alternative energy, bioenergy, carbon, electricity, energy, energy efficiency, energy markets, energy mix, energy poverty, energy sources, energy technology, fossil fuel, fuel, gas, green development, green growth, green recovery, (smart) grid, Heiligendamm-L'Aquila Process (HAP), International Energy Agency (IEA), International Energy Forum (IEF), International Renewable Energy Agency, Joint Oil Data Initiative (JODI), nuclear (when it relates to energy source), oil, Organization of Petroleum Exporting Countries (OPEC), power, raw materials, Renewable Energy and Energy Efficiency Program (REEEP), renewable, resource, St. Petersburg Global Energy Security Principles.

Exclusions

Nuclear non-proliferation, nuclear terrorism, proliferation.

Coding Rules

The unit of analysis is the paragraph/sentence.

A direct reference to energy or a cognate term is required.

Cognate or extended terms can be used without a direct reference to "energy" if they have previously been directly associated together in summit document history.

Conclusions on Energy in G8 Summit Documents

1975 Rambouillet, France

Communiqué

3. To assure in a world of growing interdependence the success of the objectives set out in this declaration, we intend to play our own full part and strengthen our efforts for closer international cooperation and constructive dialogue among all countries, transcending differences in stages of economic development, **degrees of resource endowment** and political and social systems.

4. The industrial democracies are determined to overcome high unemployment, continuing inflation and serious **energy** problems.

7. We also concentrated on the need for new efforts in the areas of world trade, monetary matters and **raw materials, including energy**.

13. World economic growth is clearly linked to the increasing availability of **energy** sources. We are determined to secure for our economies the **energy** sources needed for their growth. Our common interests require that we continue to cooperate in order to reduce our dependence on imported **energy** through **conservation** and the development of **alternative sources**. Through these measures as well as international cooperation between producer and consumer countries, responding to the long-term interests of both, we shall spare no effort in order to ensure more balanced conditions and a harmonious and steady development in the world **energy** market.

1976 San Juan, Puerto Rico, United States

Communiqué

In the field of **energy**, we intend to make efforts to develop, conserve and use rationally the various **energy** resources and to assist the **energy** development objectives of developing countries.

1977 London, United Kingdom

Communiqué

We will further **conserve energy** and increase and diversify **energy production**, so that we reduce our dependence on **oil**. We agree on the need to increase **nuclear energy** to help meet the world's **energy** requirements.

Appendix to Downing Street Summit Declaration

World Economic Prospects

The world has not yet fully adjusted to the depressive effects of the **1974 oil price rise**.

Balance of Payments Financing

For some years to come **oil importing** nations, as a group, will be facing substantial payments deficits and importing capital from **OPEC** [Organization of the Petroleum

Exporting Countries] nations to finance them. The deficit for the current year could run as high as \$45 billion. Only through a reduction in our dependence on **imported oil** and a rise in capacity of **oil-producing** nations to import can that deficit be reduced.

This deficit needs to be distributed among the **oil-consuming** nations in a pattern compatible with their ability to attract capital on a continuing basis.

This IMF proposal should facilitate the maintenance of reasonable levels of economic activity and reduce the danger of resort to trade and payments restrictions. It demonstrates cooperation between **oil-exporting** nations, industrial nations in stronger financial positions, and the IMF.

Energy

We welcome the measures taken by a number of governments to increase **energy** conservation, and most recently the program announced by the President of the United States. The increase in demand for **energy** and **oil imports** continues at a rate which places excessive pressure on the world's depleting **hydrocarbon resources**. We agree therefore on the need to do everything possible to strengthen our efforts still further.

We are committed to national and joint efforts to limit **energy** demand and to increase and **diversify supplies**. There will need to be greater exchanges of technology and joint research and development aimed at more efficient **energy** use, improved recovery and use of **coal** and other **conventional resources**, and the development of **new energy sources**.

Increasing reliance will have to be placed on **nuclear energy** to satisfy growing **energy** requirements and to help diversify sources of **energy**. This should be done with the utmost precaution with respect to the generation and **dissemination of material** that can be used for **nuclear weapons**. Our objective is to meet the **world's energy needs** and to make peaceful use of **nuclear energy** widely available, while avoiding the danger of the spread of nuclear weapons. ...To this end, we are undertaking a preliminary analysis to be completed within two months of the best means of advancing these objectives, including the study of terms of reference for **international fuel cycle evaluation**.

The **oil-importing** developing countries have special problems both in securing and in paying for the **energy** supplies needed to sustain their economic development programs. They require additional help in expanding their domestic **energy** production and to this end we hope the World Bank, as its resources grow, will give special emphasis to projects that serve this purpose.

We intend to do our utmost to ensure, during this transitional period, that the **energy** market functions harmoniously, in particular through strict conservation measures and the development of all our **energy** resources. We hope very much that the **oil-producing** countries will take these efforts into account and will make their contribution as well.

We believe that these activities are essential to enable all countries to have continuing **energy** supplies now and for the future at reasonable prices consistent with sustained noninflationary economic growth; and we intend through all useful channels to concert

our policies in continued consultation and cooperation with each other and with other countries.

North-South Relations

An International Fund for Agricultural Development has been created, based on common efforts by the developed **OPEC** and other developing nations.

1978 Bonn, Germany

Communiqué

Introduction

1. We agreed on a comprehensive strategy covering growth, employment and inflation, international monetary policy, **energy**, trade and other issues of particular interest to developing countries.

Energy

4. In spite of some improvement, the present **energy** situation remains unsatisfactory. Much more needs to be done.

5. We are committed to reduce our dependence on **imported oil**.

6. We note that the European Community has already agreed at Bremen the following objectives for 1985: to reduce the Community's dependence on **imported energy** to fifty percent, to limit net **oil imports**, and to reduce to 0.8 the ratio between the rate of increase in **energy consumption** and the rate of increase in gross domestic product.

7. Recognizing its particular responsibility in the **energy** field, the United States will reduce its dependence on **imported oil**. The U.S. will have in place by the end of the year a comprehensive policy framework within which this effort can be urgently carried forward. By year-end, measures will be in effect that will result in **oil import** savings of approximately 2.5 million barrels per day by 1985. In order to achieve these goals, the U.S. will establish a strategic **oil reserve** of 1 billion barrels; it will increase **coal** production by two-thirds; it will maintain the ratio between growth in gross national product and growth in **energy** demand at or below 0.8; and its **oil consumption** will grow more slowly than **energy consumption**. The volume of **oil imported** in 1978 and 1979 should be less than that imported in 1977. In order to discourage excessive **consumption of oil** and to encourage the movement toward **coal**, the U.S. remains determined that the prices paid for **oil** in the U.S. shall be raised to the world level by the end of 1980.

8. We hope that the **oil-exporting** countries will continue to contribute to a stable world **energy** situation.

9. Looking to the longer term, our countries will review their **national energy programs** with a view to speeding them up. General **energy targets** can serve as useful measures of the progress achieved.

10. Private and public investment to produce **energy** and to use it more efficiently within the industrial world should be increased. This can contribute significantly to economic growth.

11. The further development of **nuclear energy** is indispensable, and the slippage in the execution of **nuclear power programs** must be reversed.... The President of the United States and the Prime Minister of Canada have expressed their firm intention to continue as reliable suppliers of **nuclear fuel** within the framework of effective **safeguards**. The President intends to use the full powers of his office to prevent any interruption of **enriched uranium supply** and to ensure that existing agreements will be respected. The Prime Minister intends that there shall be no interruption of Canadian **uranium supply** on the basis of effective **safeguards**.

12. **Coal** should play an increasingly important role in the long term.

13. Joint or coordinated **energy** research and development should be carried out to hasten the development of new, including **renewable, energy sources** and the more efficient use of existing **sources**.

14. In **energy** development, the environment and human safety of the population must be safeguarded with greatest care.

15. To help developing countries, we will intensify our national development assistance programs in the **energy** field and we will develop a coordinated effort to bring into use **renewable energy** technologies and to elaborate the details within one year. We suggest that the **OECD** will provide the medium for cooperation with other countries.

16. We stress the need for improvement and coordination of assistance for developing countries in the **energy** field. We suggest that the World Bank explore ways in which its activities **in this field** can be made increasingly responsive to the needs of the developing countries, and to examine whether new approaches, particularly to financing **hydrocarbon** exploration, would be useful.

1979 Tokyo, Japan

Communiqué

2. But new challenges have arisen. Inflation, which was subsiding in most countries, is now regaining its momentum. Higher **oil prices** and **oil shortage** have reduced the room for manoeuvre in economic policy in all our countries. They will make inflation worse and curtail growth, in both the industrial and developing countries. The **nonoil developing countries** are among the biggest sufferers.

We are agreed on a common strategy to attack these problems. The most urgent tasks are to reduce **oil consumption** and to hasten the development of other **energy sources**.

Our countries have already taken significant actions to reduce **oil consumption**. We will intensify these efforts.

The European Community has decided to restrict 1979 **oil consumption** to 500 million tons (10 million **barrels** a day) and to maintain Community **oil imports** between 1980 and 1985 at an annual level not higher than in 1978. The Community is monitoring this commitment and France, Germany, Italy and the United Kingdom have agreed to recommend to their Community partners that each member country's contribution to these annual levels be specified. Canada, Japan, and the U.S. will each achieve the adjusted **import levels** to which they are pledged in the **IEA [International Energy Agency]** for 1979, will maintain their imports in 1980 at a level not higher than these 1979 levels, and will be monitoring this.

The seven countries express their will to take as goals for a ceiling on **oil imports** in 1985, the following figures:

For France, Germany, Italy, and the United Kingdom: the 1978 figure.

Canada, whose **oil production** will be declining dramatically over the period between now and 1985, will reduce its annual average rate of growth of **oil consumption** to 1%, with the consequent reduction of **oil imports** by 50,000 **barrels** per day by 1985. Canada's targets for **imports** will therefore be 0.6 million **barrels** per day.

Japan adopts as a 1985 target a level not to exceed the range between 6.3 and 6.9 million **barrels** a day. Japan will review this target periodically and make it more precise in the light of current developments and growth projections, and do their utmost to reduce **oil imports** through **conservation, rationalization of use** and intensive development of **alternative energy sources** in order to move toward lower figures.

The United States adopts as a goal for 1985 import levels not to exceed the levels either of 1977 or the adjusted target for 1979, i.e., 8.5 million **barrels** per day.

These 1985 goals will serve as reference to monitor both **energy conservation** and the development of **alternative energy sources**.

A **high-level group of representatives** of our countries and of the EEC [European Economic Community] Commission, within the OECD, will **review periodically the results achieved**. Slight adjustments will be allowed to take account of special needs generated by growth.

In fulfilling these commitments, our guiding principle will be to obtain fair supplies of **oil** products for all countries, taking into account the differing patterns of **supply**, the efforts made to limit **oil imports**, the economic situation of each country, the quantities of **oil** available, and the potential of each country for **energy conservation**.

We urge other industrialized countries to set **similar objectives** for themselves.

We agree to take steps to bring into the open the working of **oil markets** by setting up a register of **international oil transactions**. We will urge **oil companies** and **oil-exporting** countries to moderate spot market transactions. We will consider the feasibility of requiring that at the time of unloading **crude oil cargoes**, documents be presented

indicating the **purchase price** as certified by the producer country. We will likewise seek to achieve better information on the **profit situation of oil companies** and on the use of the funds available to these companies.

We agree on the importance of **keeping domestic oil prices at world market prices** or raising them to this level as soon as possible. We will seek to minimize and finally eliminate administrative action that might put upward pressure on **oil prices** that result from **domestic underpricing of oil** and to avoid new subsidies which would have the same effect.

Our countries will not buy **oil** for **governmental stockpiles** when this would place undue pressure on **prices**; we will consult about the decisions that we make to this end.

3. We pledge our countries to increase as far as possible **coal** use, production, and trade, without damage to the environment. We will endeavor to substitute **coal** for **oil** in the industrial and electrical sectors, encourage the improvement of **coal** transport, maintain positive attitudes toward investment for **coal** projects, pledge not to interrupt **coal** trade under longterm contracts unless required to do so by a national emergency, and maintain, by measures which do not obstruct **coal** imports, those levels of domestic **coal** production which are desirable for reasons of **energy**, regional and social policy.

We need to expand **alternative sources of energy**, especially those which will help to prevent further pollution, particularly increases of carbon dioxide and sulphur oxides in the atmosphere.

Without the expansion of **nuclear power** generating capacity in the coming decades, economic growth and higher employment will be hard to achieve. This must be done under conditions guaranteeing our peoples' safety. We will cooperate to this end. The **International Atomic Energy Agency** can play a key role in this regard.

We reaffirm the understanding reached at the Bonn Summit with respect to the reliable supply of **nuclear fuel**... and minimizing the risk of **nuclear proliferation**.

New technologies in the field of **energy** are the key to the world's longerterm freedom from **fuel crises**. Large public and private resources will be required for the development and commercial application of those technologies. We will ensure that these resources are made available. An **International Energy Technology Group** linked to the OECD, **IEA** and other appropriate international organizations will be created to review the actions being taken or planned domestically by each of our countries, and to report on the need and potential for international collaboration, including financing.

We deplore the decisions taken by the recent **OPEC** Conference. We recognize that relative moderation was displayed by certain of the participants. But the unwarranted rises in **oil prices** nevertheless agreed are bound to have very serious economic and social consequences. **They** mean more worldwide inflation and less growth. That will lead to more unemployment, more balance-of-payments difficulty, and will endanger stability in developing and developed countries of the world alike. We remain ready to examine with

oil-exporting countries how to define supply and demand prospects on the **world oil market**.

4. We agree that we should continue with the policies for our economies agreed at Bonn, adjusted to reflect current circumstances. **Energy shortages** and high **oil prices** have caused a real transfer of incomes. We will try, by our domestic economic policies, to minimize the damage to our economies. But our options are limited. Attempts to compensate for the damage by matching income increases would simply add to inflation.

8. The **OPEC** countries have just as important a role to play. The latest decision substantially to increase **oil prices** will also severely increase the problems facing developing countries without **oil resources**, as well as the difficulties for developed countries in helping them. The decision could even have a crippling effect on some of the developing countries. In this situation we recognize, in particular, the need for the flow of financial resources to the developing countries to increase, including private and public, bilateral and multilateral resources. A good investment climate in developing countries will help the flow of foreign investment.

We will also place special emphasis on helping developing countries to exploit their **energy potential**. We strongly support the World Bank's program for **hydrocarbon** exploitation and urge its expansion. We will do more to help developing countries increase the use of **renewable energy**; we welcome the World Bank's coordination of these efforts.

1980 Venice, Italy

Communiqué

1. In this, our first meeting of the 1980s, the economic issues that have dominated our thoughts are the **price and supply of energy** and the implications for inflation and the level of economic activity in our own countries and for the world as a whole. Unless we can deal with the problems of **energy**, we cannot cope with other problems.

2. Successive large increases in the **price of oil**, bearing no relation to market conditions and culminating in the recent decisions by some members of the **Organization of [The] Petroleum Exporting Countries (OPEC)** at Algiers, have produced the reality of even higher inflation and the imminent threat of severe recession and unemployment in the industrialized countries. At the same time they have undermined and in some cases virtually destroyed the prospects for growth in the developing countries. We believe that these consequences are increasingly coming to be appreciated by some of the **oil-exporting** countries. The fact is that the industrialized countries of the free world, the **oil-producing** countries, and the **nonoil developing countries** depend upon each other for the realization of their potential for economic development and prosperity. Each can overcome the obstacles to that development, but only if all work together, and with the interests of all in mind.

Energy

7. We must break the existing link between economic growth and **consumption of oil**, and we mean to do so in this decade. This strategy requires **conserving oil** and substantially increasing production and use of **alternative energy sources**. To this end, maximum reliance should be placed on the **price mechanism**, and **domestic prices for oil** should take into account representative **world prices**. Market forces should be supplemented, where appropriate, by effective fiscal incentives and administrative measures. **Energy** investment will contribute substantially to economic growth and employment.

8. We welcome the recent decisions of the European Community (EC), the **International Energy Agency (IEA)** and the Organisation for Economic Co-operation and Development (OECD) regarding the need for longterm structural changes to reduce **oil consumption**, continuing procedures to monitor progress, the possible use of **oil ceilings** to deal with tight market conditions, and coordination of **stock policies** to mitigate the effect of market disruption. We note that the member countries of the **IEA** have agreed that their **energy policies** should result in their collective 1985 net **oil imports** being substantially less than their existing 1985 group objective, and that they will quantify the **reduction** as part of their continuing **monitoring** efforts. The potential for reduction has been estimated by the **IEA** Secretariat, given existing uncertainties, at around 4 million **barrels** a day (MBD).

9. To conserve **oil** in our countries:

We are agreed that no new **baseload, oilfired generating capacity** should be constructed, save in exceptional circumstances, and that the **conversion of oilfired capacity** to other **fuels** should be accelerated.

We will increase efforts, including fiscal incentives where necessary, to accelerate the substitution of **oil** in industry.

We will encourage **oil** saving investments in residential and commercial buildings, where necessary by financial incentives and by establishing insulation standards. We look to the public sector to set an example.

In transportation, our objective is the introduction of increasingly **fuel-efficient vehicles**. The demand of consumers and competition among manufacturers are already leading in this direction. We will accelerate this progress, where appropriate, by arrangements or standards for improved automobile **fuel efficiency**, by **gasoline pricing and taxation** decisions, by research and development, and by making public transport more attractive.

10. We must rely on **fuels other than oil** to meet the **energy** needs of future economic growth. This will require early, resolute, and wideranging actions. Our potential to increase the **supply and use of energy sources other than oil** over the next ten years is estimated at the equivalent of **1520 MBD of oil**. We intend to make a coordinated and vigorous effort to realize this potential. To this end, we will seek a large increase in the use of **coal** and enhanced use of **nuclear power** in the mediumterm, and a substantial

increase in production of **synthetic fuels**, in **solar energy** and other sources of **renewable energy** over the longer term.

11. We shall encourage the exploration and development of our indigenous **hydrocarbon resources** in order to secure maximum production on a long-term basis.

12. Together we intend to double **coal** production and use by early 1990. We will encourage long-term commitments by **coal** producers and consumers. It will be necessary to improve infrastructures in both exporting and importing countries, as far as is economically justified, to ensure the required supply and use of **coal**. We look forward to the recommendations of the **International Coal Industry Advisory Board**. They will be considered promptly. We are conscious of the environmental risks associated with increased **coal** production and combustion. We will do everything in our power to ensure that increased use of **fossil fuels**, especially **coal**, does not damage the environment.

13. We underline the vital contribution of **nuclear power** to a more secure **energy** supply. The role of **nuclear energy** has to be increased if world energy needs are to be met. We shall therefore have to expand our **nuclear generating capacity**. We will continue to give the highest priority to ensuring the health and safety of the public and to perfecting methods for dealing with **spent fuels** and disposal of **nuclear waste**. We reaffirm the importance of ensuring the reliable supply of **nuclear fuel** and minimizing the risk of **nuclear proliferation**.

14. The studies made by the **International Nuclear Fuel Cycle Evaluation Group**, launched at the London Summit in 1977, are a significant contribution to the use of **nuclear energy**. We welcome their findings with respect to: increasing predictable **supplies**; the most effective utilization of **uranium sources**, including the development of advanced technologies; and the minimization of **proliferation risks**, including support of **International Atomic Energy Agency (IAEA)** safeguards. We urge all countries to take these findings into account when developing policies and programs for the peaceful use of **nuclear energy**.

15. We will actively support the recommendations of the **International Energy Technology Group**, proposed at the Tokyo Summit last year, for bringing new **energy technologies** into commercial use at the earliest feasible time. As far as national programs are concerned, we will by mid1981 adopt a twophased approach; first, listing the numbers and types of **commercial scale plants** to be constructed in each of our countries by the mid1980s, and, second, indicating quantitative projections for expanding production by 1990, 1995 and 2000, as a basis for future actions. As far as international programs are concerned, we will join others in creating an international team to promote collaboration among interested nations on specific projects.

16. A **high-level group of representatives** of our countries and of the EEC Commission will review periodically the results **achieved in these fields**.

17. Our **comprehensive energy strategy** is designed to meet the requirements of the coming decade. We are convinced that it can reduce the demand for **energy**, particularly

oil, without hampering economic growth. By carrying out this strategy we expect that, over the coming decade, the ratio between increases in collective **energy consumption** and economic growth of our countries will be reduced to about 0.6, that the share of **oil** in our total **energy** demand will be reduced from fifty-three percent now to about forty percent by 1990, and that our collective **consumption of oil** in 1990 will be significantly below present levels so as to permit a balance between **supply** and demand at tolerable **prices**.

18. We continue to believe that international cooperation in **energy** is essential. All countries have a vital interest in a **stable equilibrium between energy supply and demand**. We would welcome a constructive dialogue on **energy** and related issues between energy producers and consumers in order to improve the coherence of their policies.

Relations with Developing Countries

19. We are deeply concerned about the impact of the **oil price** increases on the developing countries that have to **import oil**. The increase in **oil prices** in the last two years has more than doubled the **oil** bill of these countries, which now amounts to over \$50 billion. This will drive them into ever increasing indebtedness, and put at risk the whole basis of their economic growth and social progress, unless something can be done to help them.

20. We approach in a positive spirit the prospect of global negotiations in the framework of the United Nations and the formulation of a new International Development Strategy. In particular, our object is to cooperate with the developing countries in **energy conservation and development**, expansion of exports, enhancement of human skills, and the tackling of underlying food and population problems.

21. A major international effort to help these countries increase their **energy production** is required. We believe that this view is gaining ground among **oil-exporting** countries. We ask the World Bank to examine the adequacy of the resources and the mechanisms now in place for the exploration, development and production of conventional and **renewable energy sources** in **oil-importing** developing countries, to consider means, including the possibility of establishing a new affiliate or facility by which it might improve and increase its lending programs for **energy assistance**, and to explore its findings with both **oil-exporting** and industrial countries.

26. The democratic industrialized countries cannot alone carry the responsibility of aid and other different contributions to developing countries: it must be equitably shared by the **oil-exporting** countries and the industrialized Communist countries.

Monetary Problems

27. The situation created by large **oil generated payments imbalances**, in particular those of **oil-importing** developing countries, requires a combination of determined actions by all countries to promote external adjustment and effective mechanisms for balance-of-payments financing. We look to the international capital market to continue to play the primary role in rechanneling the substantial **oil surplus funds** on the basis of

sound lending standards. We support the work in progress by our monetary authorities and the Bank for International Settlements designed to improve the supervision and security of the international banking system. The private banks could usefully supplement these efforts.

28. We urge **oil-exporting** countries to increase their direct lending to countries with financial problems, thus reducing the strain on other recycling mechanisms.

VII. Conclusions

34. The economic message from this Venice Summit is clear. The key to success in resolving the major economic challenges which the world faces is to achieve and maintain a balance between **energy** supply and demand at reasonable levels and at tolerable prices.

1981 Montebello, Canada

Communiqué

The Economy

3. The large payments deficits originating in the **1979-80 oil price increase** have so far been financed without imposing intolerable adjustment burdens but are likely to persist for some time.

4. We must involve our peoples in a greater appreciation of the need for change: change in expectations about growth and earnings, change in management and labor relations and practices, change in the pattern of industry, change in the direction and scale of investment, and change in **energy** use and supply.

Relations with Developing Countries

18. We attach high priority to the resolution of the problems created for the **nonoil** developing countries by the damaging effects on them of the high cost of **energy** imports following the **two oil price shocks**. We call on the surplus **oil-exporting** countries to broaden their valuable efforts to finance development in **nonoil** developing countries, especially in the field of **energy**. We stand ready to cooperate with them for **this purpose** and to explore with them, in a spirit of partnership, possible mechanisms, such as those being examined in the World Bank, which would take due account of the importance of their financial contributions.

Energy

28. We are confident that, with perseverance, the **energy** goals we set at Venice for the decade can be achieved, enabling us to break the link between economic growth and **oil consumption** through structural change in our **energy economies**.

29. Recognizing that our countries are still vulnerable and **energy** supply remains a potential constraint to a revival of economic growth, we will accelerate the development and use of all our **energy** sources, both **conventional and new**, and continue to promote **energy savings** and the **replacement of oil by other fuels**.

30. To these ends we will continue to rely heavily on **market mechanisms**, supplemented as necessary by government action.

31. Our capacity to deal with short term **oil** market problems should be improved, particularly through the holding of adequate levels of **stocks**.

32. In most of our countries progress in constructing new **nuclear facilities** is slow. We intend in each of our countries to encourage greater public acceptance of **nuclear energy**...We will further our efforts in the development of advanced technologies, particularly in **spent fuel management**.

33. We will take steps to realize the potential for the economic production, trade and use of **coal** and will do everything in our power to ensure that its increased use does not damage the environment.

34. We also intend to see to it that we develop to the fullest possible extent sources of **renewable energy** such as **solar, geothermal and biomass energy**. We will work for practical achievements at the forthcoming **United Nations Conference on New and Renewable Sources of Energy**.

35. We look forward to improved understanding and cooperation with the **oil-exporting** countries in the interests of the world economy.

1982 Versailles, France

Communiqué

Energy

-- The progress we have already made does not diminish the need for continuing efforts to economize on **energy**, particularly through the **price mechanism**, and to promote **alternative sources**, including **nuclear energy** and **coal**, in a longterm perspective. These efforts will enable us further to **reduce our vulnerability** to **interruptions** in the supply of **energy** and instability of **prices**. Cooperation to develop new **energy technologies**, and to strengthen our capacity to deal with **disruptions**, can contribute to our common **energy security**. We shall also work to strengthen our cooperation with both **oil-exporting** and **oil-importing** developing countries.

Development Assistance

This is why we see a need for special temporary arrangements to overcome funding problems for IDA [International Development Association] VI, and for an early start to consideration of IDA VII. We will give special encouragement to programs or arrangements designed to increase food and **energy** production in developing countries which have to import these essentials, and to programs to address the implications of population growth.

1983 Williamsburg, United States

Communiqué

6. Special attention will be given to the flow of resources, in particular official development assistance, to poorer countries, and for food and **energy** production, both bilaterally and through appropriate international institutions.

8. We all share the view that more predictability and less volatility in **oil prices** would be helpful to world economic prospects. We agree that the fall in **oil prices** in no way diminishes the importance and urgency of efforts to **conserve energy**, to develop economic **alternative energy sources**, to maintain and, where possible, improve contacts between **oil-exporting** and **importing** countries, and to encourage the growth of **indigenous energy production** in developing countries which at present lack it.

Annex: Strengthening Economic Cooperation for Growth and Stability

(4) Policies Toward Productivity and Employment. While relying on market signals as a guide to efficient economic decisions, we will take measures to improve training and mobility of our labor forces, with particular concern for the problems of youth unemployment, and promote continued structural adjustment, especially by:

-- Continued efforts in each country, and improved international cooperation, where appropriate, on structural adjustment measures (e.g., regional, sectoral, **energy policies**).

1984 London II, United Kingdom

Communiqué

(4) To maintain and wherever possible increase flows of resources including official development assistance and assistance through the international financial and development institutions, to the developing countries and particularly to the poorest countries; to work with the developing countries to encourage more openness towards private investment flows; and to encourage practical measures in those countries to conserve resources and enhance indigenous food and **energy production**. Some of us also wish to activate the Common Fund for Commodities;

11. We have considered the possible implications of a further deterioration of the situation in the Gulf for the supply of **oil**. We are satisfied that, given the **stocks of oil** presently available in the world, the availability of **other sources of energy**, and the **scope for conservation** in the use of **energy**, adequate **supplies** could be maintained for a substantial period of time by international cooperation and mutually supportive action. We will continue to act together to that end.

1985 Bonn II, Germany

No references.

1986 Tokyo II, Japan

Communiqué

2. For the industrialized countries, and indeed for the world economy, the recent decline in **oil prices** will help to sustain noninflationary growth and to increase the volume of world trade, despite the difficulties which it creates for certain **oil-producing** countries.

3. Among these are high unemployment, large domestic and external imbalances, uncertainty about the future behavior of exchange rates, persistent protectionist pressures, continuing difficulties of many developing countries and severe debt problems for some, and uncertainty about medium term prospects for the levels of **energy prices**. If large **imbalances and other distortions** are allowed to persist for too long, they will present an increasing threat to world economic growth and to the open multilateral trading system. We cannot afford to relax our efforts. In formulating our policies, we need to look to the medium and longer term, and to have regard to the interrelated and structural character of current problems.

14. Bearing in mind that the recent **oil price decline** owes much to the **cooperative energy policies** which we have pursued during the past decade, we recognize the need for continuity of policies for achieving longterm **energy market stability** and **security of supply**. We note that the current **oil market** situation enables countries which wish to do so to increase **stock levels**.

Statement on the Implications of the Chernobyl Nuclear Accident

1. We, the Heads of State or Government of seven major industrial nations and the Representatives of the European Community, have discussed the implications of the accident at the **Chernobyl nuclear power station**. We express our deep sympathy for those affected. We remain ready to extend assistance, in particular medical and technical, as and when requested.

2. **Nuclear power** is and, properly managed, will continue to be an increasingly widely used source of **energy**. For each country the maintenance of **safety** and **security** is an international responsibility, and each country engaged in **nuclear power generation** bears full responsibility for the safety of the design, manufacture, operation and maintenance of its installations. Each of our countries meets exacting **standards**. Each country, furthermore, is responsible for prompt provision of detailed and complete information on **nuclear emergencies and accidents**, in particular those with potential transboundary consequences. Each of our countries accepts that responsibility, and we urge the Government of the Soviet Union, which did not do so in the case of **Chernobyl**, to provide urgently such information, as our [countries] and other countries have requested.

3. We note with satisfaction the Soviet Union's willingness to undertake discussions this week with the Director General of the **International Atomic Energy Agency (IAEA)**. We expect that these discussions will lead to the Soviet Union's participation in the desired postaccident analysis.

4. We welcome and encourage the work of the **IAEA** in seeking to improve international cooperation on the safety of **nuclear installations**, the handling of **nuclear accidents** and their consequences, and the provision of mutual emergency assistance. Moving forward from the relevant **IAEA** guidelines, we urge the early elaboration of an international convention committing the parties to report and exchange information in the event of **nuclear emergencies or accidents**. This should be done with the least possible delay.

1987 Venice II, Italy

Communiqué

Environment

31. We welcome the important progress achieved since Tokyo, particularly in the **International Atomic Energy Agency**, in enhancing effective international cooperation with regard to safety in the management of **nuclear energy**.

Statement on the Iraq Iran War and Freedom of Navigation in the Gulf:

The **free flow of oil** and other traffic through the Strait of Hormuz must continue unimpeded.

1988 Toronto, Canada

No references

1989 Paris, France

Communiqué

Environment

36. We believe that industry has a crucial role in preventing pollution at source, in waste minimization, in **energy conservation**, and in the design and marketing of cost-effective clean technologies. The agricultural sector must also contribute to tackling problems such as water pollution, soil erosion and desertification.

37. Environmental protection is integral to issues such as trade, development, **energy**, transport, agriculture, and economic planning. Therefore, environmental considerations must be taken into account in economic decision-making. In fact good economic policies and good environmental policies are mutually reinforcing.

Clear assessments of the costs, benefits and resource implications of environmental protection should help governments to take the necessary decisions on the mix of price signals (e.g., taxes or expenditures) and regulatory actions, reflecting where possible the full value of **natural resources**.

41. We agree that increasing **energy** efficiency could make a substantial contribution to these goals. We urge international organizations concerned to encourage measures, including economic measures, to improve **energy conservation** and, more broadly, **efficiency in the use of energy** of all kinds and to promote **relevant techniques and technologies**.

We are committed to maintaining the highest safety standards for **nuclear power plants** and to strengthening international cooperation in safe operation of **power plants** and waste management, and we recognize that **nuclear power** also plays an important role in limiting output of greenhouse gases.

We express our concern that national, regional and global capabilities to contain and alleviate the consequences of maritime **oil spills** be improved. We urge all countries to make better use of the latest monitoring and clean-up technologies. We ask all countries to adhere to and implement fully the international conventions for the prevention of **oil pollution** of the oceans. We also ask the International Maritime Organization to put forward proposals for further preventive action.

1990 Houston, United States

Communiqué

The Environment

65. We acknowledge that enhanced levels of cooperation will be necessary with regard to the science and impacts of climate change and economic implications of possible response strategies. We recognize the importance of working together to develop new technologies and methods over the coming decades to complement **energy conservation** and other measures to reduce carbon dioxide and other greenhouse emissions. We support accelerated scientific and economic research and analysis on the dynamics and potential impact of climate change, and on potential responses of developed and developing countries.

69. Efforts to protect the environment do not stop at the water's edge. Serious problems are caused by marine pollution, both in the oceans and in coastal areas. A comprehensive strategy should be developed to address land-based sources of pollution; we are committed to helping in this regard. We will continue our efforts to avoid **oil spills**, urge the early entry into force of the existing International Maritime Organization (IMO) Convention, and welcome the work of that organization in developing an **international oil spills convention**. We are concerned about the impact of environmental degradation and unregulated fishing practices on living marine resources. We support cooperation in the conservation of living marine resources and recognize the importance of regional fisheries organizations in this respect. We call on all concerned countries to respect the conservation regimes.

70. To cope with energy-related environmental damage, priority must be given to improvements in **energy efficiency** and to the development of **alternative energy sources**. For the countries that make such a choice, **nuclear energy** will continue to be an important contributor to our **energy supply** and can play a significant role in reducing the growth of greenhouse gas emissions. Countries should continue efforts to ensure highest worldwide performance standards for **nuclear** and other **energy** in order to protect health and the environment, and ensure the highest **safety**.

72. Multilateral development bank programs should be strengthened to provide greater protection for the environment, including environmental impact assessments and action plans, and to promote **energy efficiency**.

1991 London III, United Kingdom

Communiqué

Economic Policy

4. Over the last year, some of our economies have maintained good growth, while most have slowed down and some gone into recession. But a global recession has been avoided. The uncertainty created by the **Gulf crisis** is behind us. We welcome the fact that there are now increasing signs of economic recovery. Progress has been made too in reducing the largest trade and current account imbalances.

Energy

17. As the **Gulf crisis** showed, the supply and price of **oil** remain vulnerable to **political shocks**, which disturb the world economy. But these **shocks** have been contained by the effective operation of the market, by the welcome increase in supplies by certain **oil-exporting** countries and by the actions co-ordinated by the **International Energy Agency (IEA)**, particularly the use of **stocks**. We are committed to strengthen the **IEA's** emergency preparedness and its supporting measures. Since the **crisis** has led to improved relations between producers and consumers, contacts among all market participants could be further developed to promote communication, transparency and the efficient working of market forces.

18. We will work to secure stable worldwide **energy supplies**, to remove barriers to **energy trade and investment**, to encourage high **environmental and safety standards** and to promote international cooperation on **research and development** in all these areas. We will also seek to improve **energy efficiency** and to **price energy** from all **sources** so as to reflect costs fully, including **environmental costs**.

19. In this context, **nuclear power generation** contributes to diversifying **energy sources** and reducing greenhouse gas emissions. In developing **nuclear power** as an **economic energy source**, it is essential to achieve and maintain the highest available standards of **safety**, including in **waste management**, and to encourage co-operation to this end throughout the world. The safety situation in Central and Eastern Europe and the Soviet Union deserves particular attention. This is an urgent problem and we call upon the international community to develop an effective means of coordinating its response.

20. The commercial development of **renewable energy sources** and their integration with **general energy systems** should also be encouraged, because of the advantages these sources offer for environmental protection and **energy security**.

21. We all intend to take a full part in the initiative of the European Community for the establishment of a **European Energy Charter** on the basis of equal rights and obligations of signatory countries. The aim is to promote free and undistorted energy trade, to enhance security of supply, to protect the environment and to assist economic

reform in Central and East European countries and the Soviet Union, especially by creating an open, non-discriminatory regime for commercial **energy investment**.

The Middle East

34. Many countries have suffered economically as a result of the **Gulf crisis**. We welcome the success of the **Gulf Crisis Financial Co-ordination Group** in mobilising nearly \$16 billion of assistance for those countries suffering the most direct economic impact of the **Gulf Crisis** and urge all donors to complete disbursements rapidly. Extensive assistance is being provided by Summit participants for the Mediterranean and the Middle East, as well as by the IMF and World Bank.

35. We believe that enhanced economic co-operation in this area, on the basis of the principles of non-discrimination and open trade, could help repair the damage and reinforce political stability. We welcome the plans of major **oil exporting** countries for providing financial assistance to others in the region and their decision to establish a **Gulf Development Fund**. We support closer links between the international financial institutions and Arab and other donors. We believe this would encourage necessary economic reforms, promote efficient use of financial flows, foster private sector investment, stimulate trade liberalisation and facilitate joint projects, e.g., in water management, which would draw on our technical skills and expertise.

Environment

55. The **burning oil wells** and polluted seas in the **Gulf** have shown that we need greater international capacity to prevent and respond to environmental disasters. All international and regional agreements for this purpose, including those of the International Maritime Organization (IMO), should be fully implemented.

57. We call for greater efforts in co-operation in environmental science and technology, in particular:

b) the development and diffusion of **energy and environment technologies**, including proposals for innovative technology programmes.

1992 Munich, Germany

Communiqué

Safety of Nuclear Power Plants in the New Independent States of the Former Soviet Union and in Central and Eastern Europe

42. While we recognise the important role **nuclear power** plays in **global energy supplies**, the safety of Sovietdesign **nuclear power** plants gives cause for great concern. Each State, through its **safety authorities and plant operators**, is itself responsible for the safety of its **nuclear power plants**. The new States concerned of the former Soviet Union and the countries of Central and Eastern Europe must give high priority to eliminating this danger. These efforts should be part of a **market-oriented reform of energy policies** encouraging commercial financing for the development of the **energy sector**.

43. A special effort should be made to improve the safety of these plants. We offer the States concerned our support within the framework of a multilateral programme of action. We look to them to cooperate fully. We call upon other interested States to contribute as well.

44. The programme of action should comprise immediate measures in the following areas:

- operational **safety** improvements;
- nearterm **technical improvements** to **plants** based on **safety** assessments;
- enhancing regulatory regimes

Such measures can achieve early and significant safety gains.

45. In addition, the programme of action is to create the basis for longerterm **safety improvements** by the examination of:

the scope for replacing less safe **plants** by the development of **alternative energy sources** and the more **efficient use of energy**;

the potential for **upgrading plants** of more recent design.

Complementary to this, we will pursue the early completion of a **convention on nuclear safety**.

46. The programme of action should develop clear priorities, provide coherence to the measures and ensure their earliest implementation. To implement the immediate measures, the existing G-24 coordination mandate on **nuclear safety** should be extended to the new States concerned of the former Soviet Union and at the same time made more effective. We all are prepared to strengthen our bilateral assistance.

In addition, we support the setting up of a supplementary multilateral mechanism, as appropriate, to address immediate **operational safety and technical safety improvement measures** not covered by bilateral programmes. We invite the international community to contribute to the funding. The fund would take account of bilateral funding, be administered by a steering body of donors on the basis of consensus, and be coordinated with and assisted by the G-24 and the EBRD.

47. Decisions on **upgrading nuclear power plants** of more recent design will require prior clarification of issues concerning **plant safety, energy policy, alternative energy sources** and **financing**. To establish a suitable basis on which such decisions can be made, we consider the following measures necessary:

- the necessary **safety** studies should be presented without delay;

- together with the competent international organisations, in particular the **IEA**, the World Bank should prepare the required **energy studies** including **replacement sources of energy and the cost implications**. Based on these studies the World Bank and the EBRD should report as expeditiously as possible on potential financing requirements.

48. We shall review the progress made in this **action programme** at our meeting in 1993.

1993 Tokyo III, Japan

Communiqué

Russia and the Other Countries in Transition

11. We welcome the progress made in the **nuclear safety program** agreed at the Munich Summit, including the establishment of the multilateral fund, in which we encourage broader participation. Urgent **safety measures**, coordinated through the G24, need to be implemented rapidly to secure real improvements at the **plants** still causing great concern. The states concerned bear the primary responsibility for respecting the fundamental principles of **nuclear safety**. Independent regulatory authorities should be strengthened and **nuclear safety** must be given higher priority in all the countries concerned, including the early closure of high risk reactors such as **Chernobyl**. We invite the World Bank, together with the **IEA**, to continue the dialogue with each of the countries concerned, and working with other lending institutions including the EBRD and the EIB, to support them in developing longer term energy strategies. Our aim is to agree as quickly as possible on a framework for coordinated action by all those involved following a country-by-country approach. We will review the progress made in 1994.

In the light of existing international obligations, we emphasize our concern over the ocean dumping of **radioactive wastes** by Russia.

1994 Naples, Italy

Communiqué

Environment

1. Environment is a top priority for international cooperation. Environmental policies can contribute to enhancing growth, employment and living standards, for example through investments in appropriate technologies, **energy efficiency improvements** and cleaning up polluted areas.

Nuclear safety

1. We welcome the progress made in the **nuclear safety programme**, agreed by the Munich and Tokyo summits, concerning the countries of Central and Eastern Europe and former Soviet Union.

2. An effective framework for coordinated action is now in place. The World Bank, working with other lending institutions including the EBRD and the EIB, and with the **IEA**, is helping countries develop **long-term energy strategies**. Some near-term safety improvements are on the way. More needs to be done and longer-term actions must be carried out. The IFIs are invited according to their mandate to make full use of their lending possibilities for this purpose.

3. We remain committed to the existing international initiatives to promote an early closure of **high risk reactors**. The closing down of the **Chernobyl nuclear power plant** is an urgent priority.

We are therefore putting forward to the Ukrainian Government an action plan for the closure of **Chernobyl**. This plan will require measures to be taken by the Ukrainian authorities as well as financial contributions from the international community.

The closure of **Chernobyl** would be accompanied by the early completion of three new **reactors** to adequate **safety standards**, by comprehensive reforms in the **energy sector**, increased **energy conservation** and the use of other **energy sources**.

4. In this context we welcome the contribution by the European Union. As a further step we are ready to provide for the **Action Plan** an initial amount of up to US \$200 million in grants, including a replenishment of the **Nuclear Safety Account** for this purpose. In addition, loans should be provided by the IFIs.

We call on other donors and international financial institutions to join us in supporting this **action plan** and will review progress regularly.

1995 Halifax, Canada

Communiqué

Nuclear Safety

48. We affirm the importance of improving **nuclear safety** in countries of Central and Eastern Europe and the Newly Independent States and welcome efforts and progress made to date. We will continue to support these initiatives.

49. Recognizing that each country is responsible for the safety of its **nuclear facilities**, we congratulate President Kuchma of Ukraine on his decision to close the **Chernobyl nuclear power plant** by the year 2000. We reaffirm the commitments of support made last year at Naples under the **G-7 Action Plan for Ukraine's Energy Sector**. We are pleased to note the replenishment of the **Nuclear Safety Account** and the commitment of additional bilateral grants for short-term **safety upgrades** and preliminary decommissioning work in anticipation of the closure of **Chernobyl**.

50. Recognizing the economic and social burden that the closure of **Chernobyl** will place on Ukraine, we [pledge] [will continue] efforts to mobilize international support for appropriate **energy production**, **energy efficiency** and **nuclear safety** projects for Ukraine. Any assistance for replacement **power** for **Chernobyl** will be based on sound economic, environmental and financial criteria. We call upon the World Bank and the EBRD to continue their co-operation with Ukraine in devising a realistic long-term **energy strategy**, based on the results of the EBRD-funded least-cost investment study, and to increase their financial contribution in support of appropriate **energy sector reform** and **investment**. We also call on the World Bank to mobilize private sector support for **non-nuclear energy** and **energy conservation**.

1996 Lyon, France

Communiqué

VII. Toward Successful Integration of Countries in Transition into the Global Economy

We welcome the Moscow Summit declaration relating to Ukraine and the commitment of President KUCHMA to close reactor n° 1 at **Chernobyl** by the end of 1996, in the framework of the program to close the whole **plant** by the year 2000. We reaffirm our commitment to full implementation of the Memorandum concluded with Ukraine, through close cooperation with this country and the international financial institutions. In this regard, we welcome the financial decisions already taken by the international community, and we stress that all parties concerned must respect the agreed agenda of the comprehensive program.

Chairman's Statement

4. Nuclear Safety and Security

We welcome with satisfaction the substantial progress made in the field of **nuclear safety and security at the Moscow Summit** in April of this year.

We have taken an important step toward enhancing international cooperation so that the use of **nuclear energy** is conducted all over the world consistently with fundamental principles of **nuclear safety**. We reaffirm our commitment, made in Moscow, to the highest internationally recognized **nuclear safety level**. In this regard, we underline that nuclear safety has to prevail over all other considerations. We reaffirm our commitment to all the principles laid down in the **Convention on Nuclear Safety** and we urge all countries to ratify this **Convention**, as soon as possible, and to participate in the **peer review mechanisms**. We stress the necessity of further progress in the establishment of relevant domestic legislation and in the enhancement of the international regime of **nuclear liability** as well as in the preparation of an **international convention on the safety of radioactive waste management**. We remain committed to assisting countries in transition in developing efficient and fully **safety-oriented energy policies**.

We welcome the adoption of the program for preventing and combating **illicit trafficking in nuclear materials**, and strongly urge other States to associate themselves with this plan following the example of Ukraine. We reaffirm the need to strengthen measures to ensure **nuclear material accounting, control and physical protection**. We also acknowledge the need to identify appropriate strategies for the **management of fissile material** no longer required for defense purposes. The latter will be discussed on the occasion of a meeting of experts which will take place in Paris in October this year. We support the efforts of the **Nuclear Weapon States** to ensure that sensitive **nuclear material (separated plutonium and highly enriched uranium)** designated as not intended for use for meeting defense requirements be placed under **IAEA safeguards**.

1997 Denver, United States

Communiqué

Oceans

22. We must strengthen our efforts to protect the world's oceans. We will work to ensure an effective and integrated effort to deal with key issues, including sustainable fishing, shipping, marine pollution from land-based and off-shore activities, and **oil spill prevention and emergency response**. In this connection, we will also enhance cooperation in monitoring the ecology in the Northern Pacific, as well as in forecasting earthquakes and tsunamis in this region.

Nuclear Safety

35. We reaffirm our commitments from the **1996 Moscow Summit on Nuclear Safety and Security** to give an absolute priority to **safety** in the use of **nuclear energy**. We note that further substantial progress is still required in the countries of Central and Eastern Europe and in the Newly Independent States, especially by strengthening regulatory authorities, enhancing **reactor safety** and improving **safety culture**. We consider further joint efforts to this end a major priority. In this regard, we attach the greatest importance to the full implementation of the **Nuclear Safety Account** agreements.

36. We note with satisfaction the entry into force by the **Nuclear Safety Convention** and the preparations now underway for the first review meeting to be held in April 1999. We applaud the rapid progress made in developing the **Joint Convention on the Safety of Spent Fuel Management and the Safety of Radioactive Waste Management** and encourage finalization. We welcome the forthcoming adoption of the **Protocol to amend the Vienna Convention** on civil liability for **nuclear damage** and of a new Supplementary Funding Convention. These conventions will facilitate international **safety cooperation** and provide for increased compensation for victims in the event of a **nuclear accident**.

Global Energy Issues

37. We decided to convene a **ministerial on energy issues** in Moscow next year, and request our officials to start preparations for such a meeting. Its results will be discussed at our next Summit.

Export Control Regimes

81. We underline our support for the arrangements that make up the **international export control regimes**. The Zangger Committee and the **Nuclear Suppliers Group**, the **Missile Technology Control Regime**, and, for those who are members, the **Australia Group export control regime**, all contribute critically to the global application and enforcement of international **export control norms**.

1998 Birmingham, United Kingdom

Communiqué

Promoting Sustainable Growth in the Global Economy

9. A crucial factor in ensuring sustainable development and global growth is an **efficient energy market**. We therefore endorse the results of our **Energy Ministers' Meeting** in Moscow in April. We shall continue cooperation on **energy matters** in the G8 framework. We recognise the importance of soundly based political and economic stability in the regions of **energy production and transit**. With the objective of ensuring **reliable, economic, safe and environmentally-sound energy supplies** to meet the projected increase in demand, we commit ourselves to encourage the development of **energy markets**. Liberalisation and restructuring to encourage efficiency and a competitive environment should be supported by transparent and non-discriminatory national legislative and regulatory frameworks with a view to establishing equitable treatment for both government and private sectors as well as domestic and foreign entities. These are essential to attract the new **investment** which our **energy sectors** need. We also recognise the importance of international co-operation to develop **economically viable international energy transmission networks**. We shall pursue this co-operation bilaterally and multilaterally, including within the framework and principles of the **Energy Charter Treaty**.

10. Considering the new competitive pressures on our **electric power sectors**, we reaffirm the commitment we made at the **1996 Moscow Summit** to the safe operation of **nuclear power plants** and the achievement of high **safety standards** worldwide, and attach the greatest importance to the full implementation of the **Nuclear Safety Account** grant agreements. We reaffirm our commitment to the stated mission of **the Nuclear Safety Working Group (NSWG)**. We agreed to deepen Russia's role in the activities of the **NSWG**, with a view to eventual full membership in the appropriate circumstances. We acknowledge successful cooperation on the pilot project of the **International Thermonuclear Experimental Reactor (ITER)** and consider it desirable to continue international cooperation for **civil nuclear fusion development**.

Year 2000 Bug

25. The Year 2000 (or Millennium) Bug problem, deriving from the way computers deal with the change to the year 2000, presents major challenges to the international community, with vast implications, in particular in the defence, transport, telecommunications, financial services, **energy** and environmental sectors, and we noted the vital dependence of some sectors on others.

1999 Köln, Germany

Communiqué

X. Tackling Global Challenges

46. We renew the commitment we made at the **1996 Moscow Summit** to safety first in the use of **nuclear power** and the achievement of **high safety standards** worldwide. In this regard, we attach great importance to the results of the **Nuclear Safety Convention**

peer review meeting and to the International Atomic Energy Agency Conference on Strengthening Nuclear Safety in Eastern Europe.

47. We reaffirm our commitment to strengthen cooperation in the field of **nuclear safety**. We welcome the concerted efforts to address the Year 2000 computer problem ("Millennium Bug") in this area. With regard to the **Nuclear Safety Account**, we continue to attach great importance to full and timely implementation of the grant agreements.

48. There has been real progress since the Birmingham Summit in tackling the "Millennium Bug". But there is still much to do. We will maintain vigorous programs of action to ensure our own Year 2000 readiness and to minimize the potential impact on our countries and on the world as a whole. We urge all other governments to do the same. In these efforts, high priority should be given to the key infrastructure sectors * **energy**, telecommunications, financial services, transport and health * as well as to defense, the environment and public safety. Public confidence will be crucial and will depend heavily upon transparency and openness as to the state of preparation in critical sectors. Governments, international organizations, infrastructure providers and information technology suppliers will need to ensure a regular flow of reliable information to the general public. It will be important, as the date approaches, for responsible bodies to have in place contingency plans to cope with system failures that may occur in the most sensitive areas despite intensive preparations. We urge third countries to do the same. We will maintain close cooperation among ourselves and with others on this as well as other aspects of the problem. We shall convene a special G8 conference on contingency planning later this year.

G7 Statement

IV. Nuclear Safety/Ukraine

16. We renew our commitment to the successful implementation of the Memorandum of Understanding (MoU) between the G7 and Ukraine. We welcome Ukraine's renewed firm commitment to the closure of **Chernobyl** on schedule by the year 2000. Our overriding goal is the closure of the **Chernobyl power plant** by the agreed timetable.

17. We note that significant progress has been made in carrying out the **Shelter Implementation Plan** to secure the environmental safety of the sarcophagus covering the remains of the destroyed **Chernobyl reactor**. To date, contributions to the **Chernobyl Shelter Fund** total US \$393 million, including US \$50 million from Ukraine. We have agreed that the G7 will help ensure the continued financing and the progress in the work under the **Shelter Implementation Plan**. We call on concerned governments and private-sector donors to join us in this effort. To this end, we plan to hold a pledging conference before the next summit.

18. We reaffirm our commitment to assist Ukraine, within the context of the MoU, in mobilizing funds for **energy projects** to help meet its **power needs**. To date, projects have been agreed totaling over US \$746 million. In addition, in the field of **nuclear safety** US \$485 million have been granted, not including the **Shelter Implementation Plan**. We look to the Government of Ukraine to accelerate the fundamental reforms in

the **energy sector**, including improvements in cash collection and privatization, to encourage financially viable investments in **power generation** and distribution and in **energy efficiency**. We commend the steady work that has allowed Ukraine, the European Bank for Reconstruction and Development and EURATOM to enter into the final phase of negotiations on loans to complete two **reactors** at Rivne and Khmelnytsky. We call on the parties to take the necessary steps to provide for an early agreement on loans for safe, cost-effective, and financially and environmentally sound projects.

2000 Okinawa, Japan

Communiqué

Life Science: Human Genome

60. Working together and with existing institutions to encourage and facilitate investment in the development and use of **sustainable energy**, underpinned by enabling domestic environments, will assist in mitigating the problems of climate change and air pollution. To this end, the increased use of **renewable energy sources** in particular will improve the quality of life, especially in developing countries. We therefore call on all stakeholders to identify the barriers and solutions to elevating the level of **renewable energy supply** and distribution in developing countries. We invite stakeholders to join in a **Task Force** to prepare concrete recommendations for consideration at our next Summit regarding sound ways to better encourage the use of **renewables** in developing countries.

70. We welcome the IMO efforts to pursue practical reform of current international regimes on maritime pollution, in particular the **1992 Convention on Civil Liability for Oil Pollution Damage** and the **1992 International Oil Pollution Compensation (IOPC) Convention** with respect to, inter alia, better compensation.

Nuclear Safety

71. We renew the commitment we made at the **1996 Moscow Summit** to **safety** first in the use of **nuclear power** and achievement of **high safety standards** world wide. We agreed to continue to co-operate in promoting a **high standard of nuclear safety**. We continue to attach great importance to the full and timely implementation of the **Nuclear Safety Account Grant Agreement**.

G7 Statement

World Economy

We are concerned about the adverse effect on world economic growth of recent developments in **world crude oil markets**. In this context, we highlight the need for greater stability of **oil markets** to help ensure sustained growth and prosperity in both **oil producing** countries and **oil consuming** countries.

Nuclear Safety/Ukraine

We welcome the decision taken by President Kuchma to close the **Chernobyl Nuclear Power Plant (NPP)** on 15 December this year. We continue to co-operate with the Government of Ukraine in addressing the problems associated with the permanent shutdown of the **Chernobyl NPP**.

We reaffirm our commitment made at the Cologne Summit to continue our support for the **Shelter Implementation Plan (SIP)**. We welcome the results of the Pledging Conference in July to ensure full implementation of the **SIP**. We appreciate the contribution of the non-G7 donors.

We urge the Government of Ukraine to **accelerate its power sector reforms**, particularly improvement of cash collection and privatisation, which will attract financially viable **investments in the energy sector**. We look forward to receiving the report of the European Bank for Reconstruction and Development in this respect. In the meantime, we affirm our commitment in line with the Memorandum of Understanding to assist the Ukraine in the preparation and implementation of **energy projects based on least cost principles**.

2001 Genoa, Italy

Communiqué

Environment

27. We recognise the importance of **renewable energy** for sustainable development, **diversification of energy supply**, and preservation of the environment. We will ensure that **renewable energy sources** are adequately considered in our national plans and encourage others to do so as well. We encourage continuing **research and investment in renewable energy technology**, throughout the world. **Renewable energy** can contribute to poverty reduction. We will help developing countries strengthen institutional capacity and market-oriented national strategies that can attract private sector investment in renewable energy and other clean technologies. We call on MDBs and national development assistance agencies to adopt an innovative approach and to develop market-based **financing mechanisms for renewable energy**. We urge the Global Environment Facility (GEF) to continue supporting environmental protection on a global scale and fostering good practices to **promote efficient energy use** and the development of **renewable energy sources** in the developing world, and stress the need to commit adequate resources to its third replenishment. We thank all those who participated in the work of the **Renewable Energy Task Force** established in Okinawa. **G8 energy ministers** will hold a meeting in the coming year to discuss these and other **energy-related issues**.

G7 Statement

World Economy

High and volatile oil prices are a concern for the world economy, in particular for the most vulnerable developing countries. Increased and **diversified energy supplies**, **improved energy efficiency**, expanded infrastructure and **stable oil markets** are important objectives. **Oil producing** and **oil consuming** countries should remain in close contact.

Nuclear Safety

We welcome Ukraine's permanent closure of the **Chernobyl Nuclear Power Plant** on 15 December 2000, which was a vital accomplishment in support of **nuclear safety**.

2002 Kananaskis, Canada

G8 Africa Action Plan

3.5 Supporting African efforts to advance regional economic integration and intra-African trade - including by:

- Helping African countries develop regional institutions in key sectors affecting regional integration, including infrastructure, water, food security and **energy**, and sustainable management and conservation of natural resources;...

2003 Evian, France

Chair's Summary

2. Enhancing Sustainable Development

Science and technology for sustainable development. We adopted an Action Plan on how best to use science and technology for sustainable development focused on three areas:

- global observation;
- **cleaner, more efficient energy** and the fight against air pollution and climate change;
- agriculture and biodiversity.

Those of us who have ratified the Kyoto Protocol reaffirm their determination to see it enter into force.

Nuclear safety. In accordance with our statement at Kananaskis, we established the G8 **Nuclear Safety and Security Group**, and adopted its mandate and the Core Principles shared by each of us, to promote the **safe and secure** use of **civil nuclear technology**.

3. Improving Security

Non-proliferation. We adopted a Statement on the proliferation of weapons of mass destruction and endorsed an Action Plan on the prevention of radiological terrorism and the **securing of radioactive sources**.

4. Regional Issues

North Korea. We addressed the North Korean **nuclear issue** in our Statement on non-proliferation. We support the efforts made by the different parties to seek by peaceful means a comprehensive solution to the North Korean **nuclear issue** and to other matters, including unresolved humanitarian problems such as the abductions. We also support the Peace and Prosperity Policy pursued by the Republic of Korea.

2004 Sea Island, United States

Chair's Summary

...We welcomed the increasing strength of the global economy. We agreed it was important to take advantage of the strong global economic environment to implement further reforms to accelerate growth in our countries. We noted the recent pledge by **oil**

producers to increase production. We recognized the need for **balanced energy policies**, which increase **energy supplies** and encourage more **efficient energy use** and **conservation**, including through **new technologies**.

2005 Gleneagles, United Kingdom

Chair's Summary

Climate Change

We have issued a statement setting out our common purpose in tackling climate change, **promoting clean energy** and achieving sustainable development.

We resolved to take urgent action to meet the challenges we face. The Gleneagles Plan of Action which we have agreed demonstrates our commitment. We will take measures to develop **markets for clean energy technologies**, to increase their availability in developing countries, and to help vulnerable communities adapt to the impact of climate change.

Global Economy, Oil and Trade

We discussed the outlook for global economic growth, which we expect to remain robust. We recognised that maintaining this growth is a challenge, and reaffirmed that each of our countries must play its part to support long-term sustainable growth. Higher and more volatile **oil prices** are an issue of particular concern both to us and to vulnerable developing countries. We emphasise the need for concrete actions to reduce market volatility through more comprehensive transparent and timely data.

We issued statements on the global economy and **oil**, trade, and on action to reduce Intellectual Property Right piracy and counterfeiting.

Global Economy and Oil

2. But challenges remain, especially persistent global imbalances and **high and volatile oil prices**.

4. Strong global growth has boosted **energy demand** and, together with **capacity constraints** and **supply uncertainties**, has led to **high and volatile oil prices**. We discussed the risks that sustained **high energy prices** pose for global economic growth. **Oil demand** is currently projected to continue its strong growth. Significant investments will be needed, in the short-, medium-, and long-terms, in **exploration, production, and energy infrastructure** to meet the needs of a growing global economy. A number of measures could help to ease the tightness of the **oil market**.

5. We agreed that **secure, reliable and affordable energy sources** are fundamental to economic stability and development, and recognised the important role that **energy conservation and efficiency, technology and innovation** can play. And we have separately published a Plan of Action on these issues in addressing climate change.

6. We encourage **oil-producing countries** to take all the necessary steps to foster a favourable investment climate sufficient to support strong global economic growth. In particular, **oil-producing countries** should ensure open markets with transparent

business practices and stable **regulatory frameworks for investment in the oil sector**, including increased opportunity for foreign investment. In this context, we emphasise the important role played by the dialogue between **oil producing countries** and **oil consuming countries** in the **International Energy Forum (IEF)**. Furthermore, we agree to consider measures to encourage the expansion of **refinery capacity**.

7. We emphasise the need for concrete actions to reduce market volatility through more comprehensive, transparent and timely data. A factor exacerbating uncertainty is the lack of transparency in **the markets**, which could be ameliorated by a **universally agreed reporting system for oil supply and demand** to be applied by **oil producing and consuming countries** and **oil companies**. Reliable and timely data on **supply, demand and stocks** facilitate timely adjustment to shifts in **supply and demand** while contributing to more solidly based investment decisions. We therefore welcome and support the **Joint Oil Data Initiative (JODI)** launched by several international organisations, including the **IEA**, and now managed by the Secretariat of the **International Energy Forum (IEF)** and urges all countries to contribute to the success of this initiative, so that market transparency benefits considerably from the establishment of robust **world oil market data**.

2006 St. Petersburg, Russia

Global Energy Security

Global Energy Challenges

1. **Energy** is essential to improving the quality of life and opportunities in developed and developing nations. Therefore, ensuring sufficient, reliable and environmentally responsible supplies of **energy** at prices reflecting market fundamentals is a challenge for our countries and for mankind as a whole.

2. To tackle this overarching goal we have to deal with serious and linked challenges such as:

high and volatile **oil** prices;

- growing demand for **energy** (estimated to rise by more than 50% by the year 2030, approximately 80% of which would still be met by fossil fuels, which are limited resources);
- increasing import dependence in many countries;
- enormous investment requirements along the entire energy chain;
- the need to protect the environment and to tackle climate change;
- the vulnerability of the critical **energy infrastructure**;
- political instability, natural disasters and other threats.

The global nature of these challenges and the growing interdependence between producing, consuming and transiting countries require strengthened partnership between all stakeholders to enhance global **energy security**. We agree that development of transparent, efficient and competitive global **energy markets** is the best way to achieve our objectives on this score. We recognize that governments and relevant international organizations also play an important role in addressing global **energy** challenges.

3. Neither global **energy security**, nor the Millennium Development Goals can be fully achieved without sustainable access to **fuels** for the 2.4 billion people and to electricity for the 1.6 billion people currently without such access in developing countries. They cannot be forgotten or marginalized.

Response of the International Community

4. Given political will, the international community can effectively address three interrelated issues: **energy security**, economic growth and environmental protection (the "3Es"). Applying fair and competitive market-based responses to the global energy challenges will help preclude potentially disruptive actions affecting **energy sources, supplies and transit**, and create a secure basis for dynamic and sustainable development of our civilization over the long term.

5. We will pursue **energy security** through a comprehensive and concerted approach consistent with our common environmental goals. Last year in Gleneagles, we agreed to enhance our work under the **Plan of Action for Climate Change, Clean Energy and Sustainable Development** and resolved to take forward the dialogue on these issues whose results will be reported at the 2008 G8 Summit in Japan. We reaffirm this commitment.

We also reaffirm our commitment to the United Nations Framework Convention on Climate Change (UNFCCC) and to meet our shared multiple objectives of reducing greenhouse gas emissions, improving the global environment, enhancing **energy security**, and cutting air pollution in conjunction with our vigorous efforts to reduce energy poverty. We also agree to work to improve access to energy in developing countries.

Statement on Global Energy Security Principles

6. Recognizing the shared interest of **energy producing and consuming** countries in promoting global energy security, we, the Leaders of the G8, commit to:

- strong global economic growth, effective market access, and investment in all stages of the **energy supply** chain;
- open, transparent, efficient and competitive markets for **energy production, supply, use, transmission and transit services** as a key to global energy security;
- transparent, equitable, stable and effective legal and regulatory frameworks, including the obligation to uphold contracts, to generate sufficient, sustainable international investments upstream and downstream;

- enhanced dialogue on relevant stakeholders' perspectives on growing interdependence, security of supply and demand issues;
- diversification of **energy supply and demand**, **energy sources**, geographical and sectoral markets, transportation routes and means of transport;
- promotion of **energy saving** and **energy efficiency** measures through initiatives on both national and international levels;
- environmentally sound development and use of energy, and deployment and transfer of **clean energy technologies** which help to tackle climate change;
- promotion of transparency and good governance in the **energy sector** to discourage corruption;
- cooperative **energy emergency response**, including coordinated planning of strategic stocks;
- safeguarding critical **energy infrastructure**; and
- addressing the **energy challenges** for the poorest populations in developing countries.

7. Based on the above objectives, principles and approaches, we will implement our common global **energy security** strategy through the following Plan of Action. We invite other states, relevant international organizations and other stakeholders to join us in these efforts.

St. Petersburg Plan of Action Global Energy Security

1. We reaffirm our commitment to implement and build upon the agreements related to **energy** reached at previous G8 summits. We will enhance global energy security through actions in the following key areas:

- increasing transparency, predictability and stability of global **energy markets**;
- improving the investment climate in the **energy sector**;
- enhancing **energy efficiency** and **energy saving**;
- diversifying **energy mix**;
- ensuring physical security of critical **energy infrastructure**;
- reducing **energy poverty**;
- addressing climate change and sustainable development.

I. Increasing Transparency, Predictability and Stability of Global Energy Markets

2. Free, competitive and open markets are essential to the efficient functioning of the global **energy system**. Efforts to advance transparency; to deepen and spread the rule of

law; to establish and strengthen predictable, efficient fiscal and regulatory regimes; and to encourage sound **energy supply and demand** policies all play significant roles in maintaining global energy security. By reducing uncertainty these efforts improve understanding of **energy market** developments, and therefore sound investment decisions and competitiveness. Regular exchanges of timely and reliable information among all market participants are also essential for the smooth functioning of world **energy markets**. Transparent, predictable national energy policies and regulatory environments facilitate development of **efficient energy** markets. We invite the **International Energy Forum (IEF)** to study ways of broadening the dialogue between energy producing and consuming countries on these issues including information exchange on their medium- and long-term respective policy plans and programs.

3. We welcome the beginning of implementation of the **Joint Oil Data Initiative (JODI)** and will take further action to improve and enhance the collection and reporting of market data on oil and other energy sources by all countries including through development of a global common standard for reporting oil and other energy reserves. In this respect, we will invite the IEF to work on the expansion of JODI membership and to continue to improve the quality and timeliness of data.

4. As a critical tool in the fight against corruption, we will also take forward efforts to make management of public revenues from **energy exports** more transparent, including in the context of the Extractive Industries Transparency Initiative (EITI) and the IMF Guide on Resource Revenue Transparency (GRRT).

5. Clear, stable and predictable national regulatory frameworks significantly contribute to global **energy security**, and multilateral arrangements can further enhance these frameworks. We support the principles of the **Energy Charter** and the efforts of participating countries to improve international **energy cooperation**.

6. Concerted actions of **energy producers and consumers** are of critical importance in times of supply crises. We encourage further efforts under the IEA aegis to promote international best practices related to emergency response measures, including establishment, coordination and release of strategic stocks, where appropriate, as well as measures to implement demand restraint and fuel-switching. We note constructive steps by major producing countries to increase oil output in response to recent tight market conditions and support additional actions.

II. Improving the Investment Climate in the Energy Sector

7. Ensuring an adequate global **energy supply** will require trillions of U.S. dollars in investment through the entire **energy chain** by 2030, a substantial share of which will be needed by developing countries. We will create and maintain the conditions to attract these funds into the **energy sector** through competitive, open, equitable and transparent markets. We understand that governments' environmental and **energy policies** are critical for investment decisions. In producing, consuming and transit states, therefore, we will promote predictable regulatory regimes, including stable, market-based legal frameworks for investments, medium and long-term forecasts of **energy demand**, clear and consistent

tax regulation, removal of unjustified administrative barriers, timely and effective contract enforcement and access to effective dispute settlement procedures.

8. We shall take measures both nationally and internationally to facilitate investments into a sustainable global **energy value chain** to:

- further save **energy** through demand-side measures as well as introduce advanced **energy-efficient technologies**;
- introduce cleaner, more efficient technologies and practices including carbon capture and storage;
- promote wider use of **renewable and alternative energy sources**;
- expand the hydrocarbon proven reserves in a way that would outpace their depletion and increase the recovery of **energy resources**;
- increase the efficiency of **oil and gas production**, and develop **resources** on the continental shelf;
- establish, expand and improve the efficiency of **oil-refining**, petrochemical and **gas** processing industries' capacity;
- develop global LNG market;
- establish or upgrade infrastructure for **energy transport and storage**;
- develop efficient **power generating** facilities; and
- expand and improve the efficiency, safety and reliability of **electricity** transmission facilities and **power grids** and their international connectivity including, where appropriate, in developing countries.

9. We encourage construction and development of hydrocarbon-processing facilities to increase **energy market** flexibility and confidence, as well as expansion, where economically viable, of trade in hydrocarbon products. We will work with all stakeholders to improve **energy regulatory regimes**, *inter alia*, through feasible technical standards harmonization. We will ask the International Standards Organization to study ways and means of harmonizing relevant standards in this context.

10. We consider it important to facilitate capital flows into **power generation**, including to build new, more efficient **power plants**, upgrading existing plants to include wider use of **renewables**, and to construct transmission lines, develop interregional **energy infrastructure** and facilitate exchange of **electrical power**, including trans-border and transit arrangements. We encourage the development of competitive **power markets**, interregional **energy infrastructure**, and exchange of **electrical power**.

11. Rapidly growing LNG trade is gradually supplementing the existing regional systems of pipeline gas supplies. To reduce huge investment risks and facilitate smooth functioning of the emerging global LNG market, we will seek to create appropriate investment conditions.

12. High and increasing investment exposure calls for better risks sharing between all stakeholders in **energy supply chain** which will ensure reliable and sustainable **energy flows**. Economically sound diversification between different types of contracts, including market-based long-term and spot contracts, could contribute to such risks mitigation, as would timely decision-making and appropriate adherence and enforcement of contractual agreements.

13. We will work to reduce barriers to **energy investment and trade**. It is especially important that companies from **energy producing and consuming** countries can invest in and acquire upstream and downstream assets internationally in a mutually beneficial way and respecting competition rules to improve the global **efficiency of energy production and consumption**. Market-based investment flows between and among nations will also enhance **energy security** by increasing confidence in access to markets or sources of supply.

14. Ensuring the long-term availability of skilled workforce throughout the **energy sector** is critical to energy security. We encourage institutions of higher learning and the private sector to take the necessary steps in providing appropriate training to adequately develop human resources in the energy sector, including **new and innovative energy sources and technologies** needed for ensuring longer-term energy security.

III. Enhancing Energy Efficiency and Energy Saving

15. **Energy saved is energy produced** and is often a more affordable and environmentally responsible option to meet the growing **energy demand**. Efforts to improve **energy efficiency** and **energy saving** contribute greatly to lowering the **energy intensity** of economic development thus strengthening global energy security. Increased energy efficiency and conservation reduce stress on infrastructure and contribute to a healthier environment through decreased emission of greenhouse gases and pollutants.

16. We will move forward with timely implementation of the Gleneagles Plan of Action. We have instructed our relevant ministers to continue the **Dialogue on Climate Change, Clean Energy and Sustainable Development** and report its outcomes to the G8 Summit in 2008. We call upon other states, especially fast-growing developing economies, to join the corresponding G8 initiatives. These outcomes can also be relevant to the dialogue on long-term cooperation to address climate change under the UNFCCC. Those of us who have ratified the Kyoto Protocol recognize the role of its flexibility mechanisms in promoting **energy efficiency**. It is important to engage the private sector and other stakeholders in achieving these ends.

17. A comprehensive approach within the international community to **energy saving, energy efficiency** and the extension of relevant efforts, including sharing best practices,

to the entire **energy value chain** are important in this respect. For this purpose, we shall undertake to:

- strengthen and elaborate the system of national and multilateral **energy efficiency** statistics;
- consider national goals for reducing **energy intensity** of economic development to be reported by the end of the year;
- for **energy** intensive products, encourage the development, extension and deployment of best practice **energy efficiency** labeling programs, and increase efforts to adopt the most stringent **energy efficiency standards** that are technically feasible and economically justified. Individual countries should set these standards taking into account national conditions. In this context the **IEA** initiatives on standby power ("1 Watt" initiative), minimum efficiency standards for television set-top boxes and digital television appliances, energy efficient lighting and fuel-efficient tire program are promising and should be examined in more detail;
- take necessary measures, including financial and tax incentives at home for the promotion of **energy-efficient technologies**, and the actual use of those available technologies on a wide-scale basis;
- demonstrate leadership at the national level by incorporating **energy efficient technologies** and practices in government buildings and drawing upon **alternative energy resources** to help power them;
- raise public awareness about the importance and benefits of **energy efficiency and energy saving**.
- encourage relevant actions taken by multilateral development banks, including EBRD and the World Bank;
- increase the Global Environment Facility's involvement in **energy efficiency** projects.

18. We will invite the World Bank, the **IEA**, and other organizations as appropriate to work on improvement of internationally accepted standards, labeling and best practices, and public awareness campaigns, in accordance with their respective mandates and comparative advantages.

19. As part of an integrated approach to the entire **resource cycle** we reaffirm our commitment to comprehensive measures to optimize the resource cycle within the 3Rs Initiative (Reduce, Reuse, Recycle). In furthering these efforts, we will set targets as appropriate taking account of resource productivity. We will also raise awareness of the importance of **energy efficiency** and environmental protection through national as well as international efforts.

20. Increasing **energy saving and efficiency** we will pay more attention to the energy sector itself, which can contribute significantly to this end by reducing losses in production and transportation. Our priority measures in this area will include:

- raising the environmental and efficiency levels for processing **hydrocarbons**;
- reducing gas flaring to minimal levels and promoting utilization of associated **gas**;
- improving **energy infrastructure**, including minimizing **oil** and **oil** products losses in transportation and gas emissions from gas systems;
- using methane otherwise released in the atmosphere from **coal** mining, landfills, and agricultural operations.

21. Since 2/3 of world **oil** is consumed by the transportation sector and its fuel consumption is outpacing general **energy consumption** we will pay special attention to this sector of **energy demand**. For making transportation more **energy efficient** and environmentally advanced we shall:

- share best practices to promote **energy efficiency** in the transportation sector;
- develop programs in our respective countries, consistent with national circumstances, to provide incentives for consumers to adopt efficient vehicles, including clean diesels and hybrids; and introduce on a large scale efficient public hybrid and/or clean diesel transportation systems, where appropriate;
- promote diversification of vehicle energy systems based on new technologies, including significant sourcing from biofuels for motor vehicles, as well as greater use of compressed and liquefied natural gas, liquefied petroleum gas and synthetic liquid fuels;
- promote wider use of modern technologies, materials and devices on traditional vehicles, leading to lighter, more aerodynamic and more efficient engines and other transport components such as transmission and steering systems, tires, etc.;
- increase research to develop vehicles using **gasoline/hydrogen fuel** and **hydrogen fuel** cells to promote the "hydrogen economy";
- facilitate the development of trans-modal and trans-border transportation, where appropriate;
- study further the Blue Corridor project by the UN Economic Commission for Europe;
- continue to consider the impact of the air transport sector on energy consumption and greenhouse gas emissions noting international cooperation on these issues.

22. We call upon all countries to offer incentives to increase **energy efficiency** and to promote **energy conservation**.

IV. Diversifying Energy Mix

23. Diversification of the **energy mix** reduces global **energy security** risks. We will work to develop **low-carbon** and **alternative energy**, to make wider use of **renewables** and to develop and introduce innovative technologies throughout the entire **energy sector**.

Alternative, Cleaner Low-Carbon Energy

24. We shall further encourage the activities of the Carbon Sequestration Leadership Forum (CSLF) aimed at preparing and implementing demonstration projects on CO₂ capture and storage and on the development of zero emission **power plants**. In this context we will facilitate development and introduction of **clean coal** technologies wherever appropriate.

25. We encourage all **oil** producing states and private sector stakeholders to reduce to minimal levels **natural gas** venting or flaring by facilitating the use of associated **gas**, including its refining and processing into **fuels** and petrochemical products. In this respect we support the efforts of Global Gas Flaring Reduction Partnership (GGFR) and Methane-to-Markets Partnership (M2M) to implement projects on the production of marketable methane from landfills, agriculture waste and **coal**-bed methane, particularly in developing countries.

26. We support the transition to the Hydrogen Economy, including in the framework of the International Partnership for the Hydrogen Economy (IPHE). A critical part of this effort is to develop common international standards in the field of commercial development of **hydrogen power**, infrastructure and security requirements.

Nuclear Energy

27. We recognize that G8 members pursue different ways to achieve **energy security** and climate protection goals.

28. As we meet on the 20th anniversary of the Chernobyl accident, we reiterate the commitments made during the 1996 Moscow Summit on Nuclear Safety and Security, and the paramount importance of safety, security and non-proliferation.

29. Those of us who have or are considering plans relating to the use and/or development of safe and secure **nuclear energy** believe that its development will contribute to global **energy security**, while simultaneously reducing harmful air pollution and addressing the climate change challenge:

- The development of innovative **nuclear power systems** is considered an important element for **efficient and safe nuclear energy development**. In this respect, we acknowledge the efforts made in the complementary frameworks of the INPRO project and the Generation IV International Forum.
- Until advanced systems are in place, appropriate interim solutions could be pursued to address back-end fuel cycle issues in accordance with national choices and non-proliferation objectives.

- Benefits will stem from improving the economic viability of **nuclear power**. We recognize that independent effective regulation of nuclear installations is essential for the development of infrastructure supporting safe and secure **nuclear energy**.

30. We are committed to:

- further reduce the risks associated with the safe use of **nuclear energy**. It must be based on a robust regime for assuring nuclear non-proliferation and a reliable safety and security system for nuclear materials and facilities;
- ensure full implementation of the international conventions and treaties in force today which are a prerequisite for a high level of safety and a basis to achieve a peaceful and proliferation-resistant nuclear energy use. The responsibility of all nations to support the work of the IAEA and all measures to implement these conventions and treaties in these fields is emphasized;
- continue to consider nuclear safety and security issues in the Nuclear Safety and Security Group (NSSG).

31. We reaffirm the objective set out in the 2004 G8 Action Plan on Non-Proliferation to allow reliable access of all countries to **nuclear energy** on a competitive basis, consistent with non-proliferation commitment and standards. Building on that plan, we intend to make additional joint efforts to ensure reliable access to low enriched uranium for **power reactor fuel** and spent **fuel** recycling, including, as appropriate, through a multilateral mechanisms provided that the countries adhere to all relevant international non-proliferation commitments and comply with their obligations.

32. In this respect, we take note of recent potentially complementary initiatives put forward in the IAEA framework regarding multilateral **fuel supply** assurances, as well as the proposals made by Russia and the U.S., aimed at further development of peaceful **nuclear energy**, in a manner that promotes proliferation resistance of the **nuclear fuel cycle**, including preventing the spread of sensitive nuclear technologies.

Renewables

33. A large-scale use of **renewable energy** will make a significant contribution to long-term **energy supply** without adverse impact on climate. The **renewable solar, wind, hydro, biomass, and geothermal energy resources** are becoming increasingly cost competitive with **conventional fuels**, and a wide variety of current applications are already cost-effective. Therefore, we reaffirm our commitment to implement measures set out in the Gleneagles Plan of Action.

34. We welcome the work of interested parties in international mechanisms and programs dealing with **renewable energy**, including the **Renewable Energy and Energy Efficiency Program (REEEP)**, the **Renewable Energy Policy Network for the 21st Century (REN21)**, and the **Mediterranean Renewable Energy Partnership (MEDREP)**. We welcome the establishment of the **Global Bio-Energy Partnership (GBEP)**. We will work in partnership with developing countries to foster the use of **renewable energy**.

35. We will continue enhancing international cooperation in using the potential of biomass, and advanced sustainable forest management practices. Both help to diversify local **energy consumption** and make an important contribution to carbon sequestration, as well as furthering a wide range of economic and environmental benefits...

Innovative Energy Technologies

37. We will work in partnership with the private sector to accelerate market entry and utilization of innovative **energy technologies** by supporting market-led policies that encourage investments in this area.

38. Despite the increased role of **alternative sources in the energy mix**, hydrocarbons are expected to continue to play a leading role in total **energy consumption** well into this century. Therefore we will work with the private sector to accelerate utilization of innovative technologies that advance more efficient hydrocarbon production and reduce the environmental impact of its production and use. These include technologies for deep-sea **oil and gas production**, **oil production** from bitumen sands, **clean coal** technologies, including carbon capture and storage, extraction of **gas** from **gas-hydrates** and production of synthetic **fuel**.

39. We will take measures to develop other promising technologies including construction of advanced electricity networks, superconductivity, nanotechnology, including nanobiotech, etc. We welcome recent initialing ITER agreement by the participating countries and take this opportunity to encourage R&D programs on **fusion energy** within its framework.

40. We shall facilitate closer ties between fundamental and applied research to promote the earliest economically viable market entry of these technologies.

V. Securing Critical Energy Infrastructure

41. The security of the world's **energy infrastructure** is connected and mutually dependent. Given the global nature of the energy infrastructure, we recognize that no country can insulate itself from danger elsewhere. Hence, we are committed to ensuring the security of the **global energy network**, and will work to gain a better understanding of its vulnerabilities and ways to improve our efforts to prevent disruptions by deliberate attack. We support a coordinated, international process to assess risks to **energy infrastructures**, and a more effective means of sharing **energy infrastructure security** best practices and expertise.

42. We commit ourselves to address threats and vulnerabilities to critical **energy infrastructures**, and to promote international cooperation in this regard. We instruct our experts to meet as necessary to examine and make recommendations on addressing the many challenges in securing energy infrastructure and deliver to the Russian Presidency at the end of this year a comprehensive report on:

- defining and prioritizing the most important vulnerabilities among **energy infrastructure** sites, and share methodologies for assessing and mitigating them;
- assessing potential risks of terrorist attacks;

- developing a compendium of effective security response best practices across all **energy sectors** within our countries;
- developing, implementing, and providing to other countries a checklist for the physical security of critical **energy infrastructure**;
- encouraging international cooperation on R&D for technologies to enhance critical infrastructure protection;
- establishing points of contact for coordination of technical assistance in this area;
- continuing to advocate the adoption of export controls on radioactive sources and new initiatives to prevent terrorists' access to radioactive sources...

VI. Reducing Energy Poverty

44. We confirm our commitment to the UN Millennium Development Goals, including through facilitating a better **access to energy**. It is impossible to drastically reduce general poverty, support health services, provide clean drinking water and sanitation, promote more productive agriculture and food yields, and secure investment in job-creating enterprises in developing countries without addressing the challenge of **energy poverty**. We will help vulnerable countries overcome the macroeconomic shocks related to **energy prices**, and the longer term challenge of facilitating **access to energy** for the poorest populations.

45. A sound strategy to address **energy poverty** should be linked with:

- development of national and local institutional capacities and management improvements in the area of **energy policy** and related infrastructure needs, including training of local staff;
- facilitation of public participation in and public understanding of, **energy policies and practices**;
- national **energy investment** and access targets linked to poverty reduction policies;
- expansion of existing frameworks, such as the **EU Energy Initiative** (EUEI), the MEDREP, GBEP, the **Global Village Energy Partnership** (GVEP); the **Renewable Energy and Energy Efficiency Partnership** (REEEP), for private-public partnerships to foster investment that increases access to affordable energy services;
- establishment of an **energy efficiency** program and development of decentralized technologies, where economically justified, and geared toward reducing the **cost of energy** for the poor;
- a targeted and transparent social safety net system that can help poor and vulnerable customers pay for **energy**.

46. The majority of **energy investment** will need to come from the private sector. Assistance programs for developing countries should work towards promoting the improved policy and regulatory structures necessary to attract that capital.

47. The international financial institutions (IFIs) have an important role to play in tackling these challenges. We welcome the progress of the multilateral development banks to re-invigorate their efforts to promote investment in **alternative energy sources**, increased **energy efficiency** and adaptation in developing countries. We also welcome the launching of the International Monetary Fund's Exogenous Shocks Facility, and invite other non-G8 countries to contribute to it. We call upon other countries and IFIs to facilitate **access to energy** in the poorest countries by promoting private-public partnerships.

48. To improve access to **reliable, modern, and sustainable energy services** to the populations of energy poor developing countries, we will enhance existing bilateral and multilateral development mechanisms. We welcome the **EU's Energy Facility**, which will use grants to co-finance projects aimed at filling the **energy gap**, especially in Africa, as well as activities by Japan in partnership with AfDB to promote the "Enhanced Private Sector Assistance" (EPSA) for Africa. We look forward to the outcome of the UN Commission on Sustainable Development's two-year cycle of work (2006-7) devoted to the review/policy discussion of the **Energy for Sustainable Development** issue.

49. We will facilitate development of local **energy resources**, including those based on core generation technologies and on **renewable energy**, such as **hydropower, wind power, geothermal power, biomass, and the effective use of solar energy**, to contribute to poverty reduction and long-term energy sustainability in developing countries. These measures include developing **energy infrastructure** capable, *inter alia*, of reducing vulnerability to energy shocks.

50. We instructed our experts to work together with other countries, international and regional financial institutions (World Bank, Regional Development Banks, UN agencies, etc.), the private sector and other stakeholders to facilitate technology transfer in the areas of **energy efficiency, energy saving, renewable energy and decentralized local sources to reduce energy poverty** thereby improving **energy access** and enhancing **energy efficiency** in developing countries. Building on the Gleneagles Plan of Action, such concerted efforts may help improve energy efficiency and promote **energy conservation** in developing countries through the following actions:

- supporting the development of infrastructure to improve **energy access** tailored to specific needs and targeted towards **energy efficiency**;
- assisting in policy and institutional capacity building for improving **energy access**, enhancing **energy efficiency** and promoting **energy conservation** and **diversification of energy sources**;
- promoting **renewable energy**;
- encouraging **rural electrification**, using both **grid and non-grid** connected solutions;

- developing human resources in cooperation with the private sector.

51. We look forward to the completion and implementation of the **World Bank Clean Energy Investment Framework** and underline that it should give increased attention to improving **access to energy services**....

VII. Addressing Climate Change and Sustainable Development

53. We reaffirm our intention to deliver on commitments made in Gleneagles in order to meet our shared and multiple objectives of reducing greenhouse gas emissions, improving the global environment, enhancing energy security and cutting air pollution in conjunction with our vigorous efforts to reduce poverty....

We are undertaking a number of approaches to deal with the interrelated challenges of **energy security**, air pollution control, and reducing greenhouse gas associated with long-term global climate change. With respect to climate change, we reaffirm our shared commitment under the UNFCCC and its related mechanisms.

Those of us committed to making the Kyoto Protocol a success underline the importance we attach to it, view Clean Development Mechanism and the Joint Implementation Mechanism as central elements of this, and look forward to the process to develop it further.

Some or all of us are participating in the following other initiatives to address these challenges: Asia-Pacific Partnership on Clean Development and Climate, the Methane to Markets Partnership, the International Partnership for the Hydrogen Economy, the Carbon Sequestration Leadership Forum, the **Renewable Energy and Energy Efficiency Partnership** and the **Global Bio-Energy Partnership**....

54. We welcome the progress made by the World Bank and the IEA on developing a framework for **clean energy** and sustainable development and on identifying **alternative energy** scenarios and strategies to support and implement elements of the Gleneagles Plan of Action.

55. We welcome the progress made at the first meeting of the **Gleneagles Dialogue on Climate Change, Clean Energy and Sustainable Development**, held on 1 November last year. We look forward to the next Ministerial meeting in Mexico in October 2006, where we will continue to identify opportunities for greater collaboration to tackle climate change, while pursuing **energy security** and sustainable development through deployment of **cleaner, more efficient and low-carbon energy** technologies, finance and market mechanisms, including, as appropriate, Clean Development Mechanism, Joint Implementation, emissions trade, and adaptation.

Update on Africa

Since the late 1990s, G8 Summits have given Africa a high priority. At Gleneagles last year the G8 agreed to a further set of measures to reduce poverty and support sustainable development in Africa. We are continuing to work in partnership with Africa, in particular in support of the AU and NEPAD, with a special focus this year on infectious diseases, education and **energy security**. This report reviews progress on G8

commitments on Africa since the last G8 Summit, while respecting the critical role of African ownership of the reform process....

Promoting Good and Responsive Governance: We have, with our international partners, secured the entry into force of the UN Convention against Corruption in December 2005: 22 African and 3 G8 countries are among those who have ratified. 25 African countries have signed up to the African Peer Review Mechanism and 3 have completed the process. Good progress has been made in improving transparency and accountability including in the **oil and gas industries** through the Extractive Industries Transparency Initiative (EITI), in which 15 African countries and 23 companies take part. We have successfully completed work at the OECD to strengthen significantly anti-bribery requirements for those applying for export credits and credit guarantees.

We are helping Africa construct the road, rail, **energy** and other networks necessary for growth including through our support to the Infrastructure Consortium for Africa inaugurated in October 2005, which has already identified and secured funding decisions on eleven regional projects from NEPAD's Short Term Action Plan (STAP) worth \$740m. We are helping Africa attract the private financing and inward investment which will drive growth including through the NEPAD-OECD Africa Investment Initiative, the Enhanced Private Sector Assistance for Africa and the Investment Climate Facility, launched at the World Economic Summit in June. We continue to provide significant support to the development of agriculture in Africa. Increasingly, the AU/NEPAD Comprehensive Africa Agriculture Development Programme (CAADP) is providing a framework for collective action....

Continuing work

We have made substantial progress since Gleneagles. Our key steps over the next year include:...

- tackling infectious diseases, strengthening education and enhancing **energy security** in Africa and the wider world. The details are set out in our separate statements;...

Chair's Summary

We met in St. Petersburg for our annual Summit, 15-17 July 2006, to discuss collective approaches to pressing international issues. On July 17 we were joined for our discussion on priority themes of the Russian Presidency (global **energy security**, development of modern education systems and fight against infectious diseases) as well as globalization, international trade and Africa by the leaders of Brazil, China, India, Mexico and South Africa and by the heads of the African Union, the Commonwealth of Independent States, the **International Energy Agency**, the **International Atomic Energy Agency**, the United Nations, UNESCO, the World Bank, the World Health Organization, and the World Trade Organization.

Global Energy Security

We discussed challenges to global **energy security** and set out our common goals and approaches aimed at ensuring sufficient, reliable and environmentally responsible supplies of **energy** at prices reflecting market fundamentals.

We agreed that dynamic and sustainable development of our civilization depends on reliable access to **energy**. It is best assured by strengthened partnership between **energy** producing and consuming countries, including enhanced dialogue on growing **energy** interdependence, security of supply and demand issues. We stressed that open, transparent, efficient and competitive **energy** markets are the cornerstone for our common **energy security** strategy. We also recognized that governments and relevant international organizations play an important role in this area.

We adopted the St.Petersburg Plan of Action to enhance global **energy security** through efforts to increase transparency, predictability and stability of the global **energy** markets, improve the investment climate in the **energy** sector, promote **energy efficiency** and **energy saving**, diversify energy mix, ensure physical safety of critical **energy** infrastructure, reduce **energy poverty** and address climate change and sustainable development.

In this Plan we undertook to reduce barriers to **energy** investment and trade, making it possible for companies from **energy** producing and consuming countries to invest in and acquire upstream and downstream assets internationally. We also stressed the need for better risks sharing between all stakeholders in the **energy** supply chain through economically sound diversification between different types of contracts, including market-based long-term and spot contracts, timely decision-making and appropriate adherence and enforcement of contractual agreements.

Energy saved is energy produced. Therefore, we have adopted a comprehensive approach to energy saving and **energy efficiency**.

Those of us who have or are considering plans related to the use of safe and secure **nuclear energy** underlined its important contribution to global **energy security**.

Meeting our multiple goals and objectives in the area of global **energy security** we will act to reduce **energy poverty** in developing countries.

We reaffirmed our commitments to meet the objectives of reducing greenhouse gas emissions and dealing with climate change, including through promoting an inclusive dialogue on further action in the future.

Other Issues

Having discussed the state of the world economy, we concluded that global growth remains strong and has become more broadly based. We also discussed high and volatile **energy prices**, global imbalances and growing protectionism. We re-iterated our commitment to address global imbalances, working together to remove distortions to the global adjustment process, promote liberalization of trade and investment, and modernize the international financial institutions.

2007 Heiligendamm, Germany

Chair's Summary

Growth and Responsibility in the World Economy

Heiligendamm Process: We discussed global challenges with the Leaders of Brazil, China, India, Mexico, and South Africa. We acknowledged our respective responsibilities and the need to develop common solutions. We therefore agreed to launch a new topic-driven dialogue on key world economic issues with the aim of reaching concrete results until the G8 Summit in Italy 2009. The topics of this dialogue include issues relating to the freedom of investment and investment conditions, including corporate social responsibility; the promotion and protection of innovation; **energy efficiency** and technology cooperation; and development policy. The road map of this process is described by a joint declaration of the G8 Presidency and Brazil, China, India, Mexico and South Africa.

Climate Change, Energy Efficiency and Energy Security

Combating climate change is one of the major challenges for mankind and it has the potential to seriously damage our natural environment and the global economy. We noted with concern the recent IPCC report and its findings. We are convinced that urgent and concerted action is needed and accept our responsibility to show leadership in tackling climate change. In setting a global goal for emissions reductions in the process we have agreed in Heiligendamm involving all major emitters, we will consider seriously the decisions made by the European Union, Canada and Japan which include at least a halving of global emissions by 2050. We have agreed that the UN climate process is the appropriate forum for negotiating future global action on climate change. We are committed to moving forward in that forum and call on all parties to actively and constructively participate in the UN Climate Change Conference in Indonesia in December 2007 with a view to achieving a comprehensive post 2012-agreement (post Kyoto-agreement) that should include all major emitters. To address the urgent challenge of climate change, it is vital that the major emitting countries agree on a detailed contribution for a new global framework by the end of 2008 which would contribute to a global agreement under the UNFCCC by 2009. We reiterate the need to engage major emitting economies on how best to address the challenge of climate change. We stress that further action should be based on the UNFCCC principle of common but differentiated responsibilities and capabilities. Technology, **energy efficiency** and market mechanisms, including emission trading systems or tax incentives, are key to mastering climate change as well as enhancing **energy security**. We reaffirmed the **energy security** principles we agreed at St. Petersburg. In our discussion with the emerging economies we agreed that **energy efficiency** and technology cooperation will be crucial elements of our follow-up dialogue.

Foreign Policy and Security Issues

Counter Terrorism: We adopted a Statement on Counter-Terrorism. We condemned all acts of terrorism, whatever their alleged motivation, in the strongest terms and reaffirmed that there could be no justification for such acts. We pledged to work closely together to react efficiently to new and continuing threats stemming from terrorist activities. We defined specific areas of further joint work to counter terrorism including, among others,

responding to the terrorist and criminal abuse of modern communication and information technology, protecting critical **energy** infrastructures, improving transportation security, countering terrorist recruitment and preventing nuclear terrorism. We reaffirmed our support for the central role of the United Nations in the international fight against terrorism; in this context, we are providing a Report on G8 Support to the United Nations' Counter-Terrorism Efforts.

Nuclear Safety and Security: The **Nuclear Safety and Security Group (NSSG)** provided technically informed, strategic policy advice on selected **nuclear** safety and **radiation** protection issues, discussed **nuclear** safety improvement programs for operating **Nuclear** Power Plants (e.g. in Armenia, Ukraine), and furthered international activities on the safety and security of **radioactive** sources. The G8 commitments with regard to **Chernobyl** were reaffirmed.

Growth and Responsibility in Africa: Ensuring Sustainable Investment

The G8 welcome the progress made on the elaboration of the **Clean Energy Development and Investment Framework (CEDIF)** and will work with the World Bank, the African Development Bank and other donors with a view to implementing the **Energy Access Action Plan for Africa**. We reaffirm our commitment made in Gleneagles to helping Africa strengthen its adaptive capacity on climate change and work with African countries in the context of their national development strategies.

To improve **energy security** in Africa, we will give particular attention to **energy efficiency** and the use of domestic renewable **energy** sources, including **hydropower**, where appropriate, and to give priority support to the rehabilitation of existing **hydropower** plants, and the development of small **hydropower** plants. We will further promote responsible sustainable bio-**energy** production, generated from **renewable** biomass resources, with a view to contributing to climate protection without jeopardizing food security and the environment.

G8 Summit Statement on Counter Terrorism

Therefore, today, in Heiligendamm, we pledge to do everything in our power to counter the conditions that terrorists exploit, to keep the world's most dangerous weapons out of the hands of terrorists, to protect critical transport and **energy** infrastructures, to combat the financing of terrorism and illicit procurement networks and to remain watchful of the ways that terrorists and criminals exploit modern communication and information technologies.

Protecting Critical Energy Infrastructure

Given the trans-national nature of **energy** infrastructures, no country can insulate itself from dangerous disruptions. We resolve to continue our efforts to protect critical **energy** infrastructures from terrorist attacks. At the St. Petersburg Summit, we committed to ensure the security of the global **energy** network, and pledged to gain a better understanding of its vulnerabilities and develop ways to improve our efforts to prevent disruptions due to deliberate attacks. We instructed national experts to develop recommendations to address the challenges to secure critical **energy** infrastructure. Today we announce the initiatives we are taking in this regard:

- Assessing the vulnerabilities of and potential risks to critical **energy** infrastructure;
- Sharing best practices of effective security responses;
- Evaluating potential threats to critical **energy** infrastructure.

Preventing Nuclear Terrorism

Weapons of mass destruction in the hands of terrorists are the pre-eminent threat to international peace and security. Preventing terrorists from acquiring **nuclear weapons** is essential to maintaining our way of life. We commit to work together in this endeavour. We therefore urge all States to ratify as soon as possible the **International Convention for the Suppression of Acts of Nuclear Terrorism**; and the Convention on the Physical Protection of Nuclear Material **and its 2005 Amendment**. In this regard, we also underscore the continuing significance of UN Security Council Resolutions 1373 and 1540 and call upon all states to ensure full compliance with their provisions. As partner nations of the **Global Initiative to Combat Nuclear Terrorism**, we endorse the Initiative's continuing development and efforts to broaden participation.

Joint Statement by the German G8 Presidency and the Heads of State and/or Government of Brazil, China, India, Mexico and South Africa on the Occasion of the G8 Summit in Heiligendamm

Fighting Climate Change

We face serious challenges in tackling climate change and achieving sustainable development globally. We reaffirm our commitment to the United Nations Framework Convention on Climate Change (UNFCCC) and to its objective through both mitigation and adaptation in accordance with our common but differentiated responsibilities and respective capabilities. On this basis and taking into account the scientific knowledge as represented in the recent IPCC reports, we remain committed to contribute our fair share to tackle climate change in order to stabilize green house **gas** concentrations at a level that would prevent dangerous anthropogenic interference with the climate system. To this end we need a flexible, fair and effective global framework and concerted international action. We underline the crucial role of economic incentives, in particular by carbon markets, for the necessary investments in climate friendly technologies at large scale. The adaptation to climate change will be a major challenge for all countries, in particular for developing countries, and means for adaptation need to be included in a future agreement along with enhanced technology cooperation and financing. We call on all parties to actively and constructively participate in the negotiations on a comprehensive agreement at the UNFCCC Conference in Indonesia in December 2007.

Energy

We recognise the need for closer, more practical and result-oriented regional and international cooperation in the **energy** sector, especially in ensuring secure and affordable supplies of **energy** as well as in improving **energy efficiency** and the access to advanced and affordable **energy** technologies. We confirm our commitment to promote **energy efficiency**, through cost-effective solutions, to advance the effective use of **fossil fuels**, such as the clean **coal** technology, and to increase the use of cleaner and

renewable energy sources, such as biofuels and biomass, as an important step towards secure, stable and competitive **energy** supplies for achieving sustainable development.

Development, particularly in Africa: We reiterate our commitment to the Millennium Development Goals (MDGs), the eradication of poverty and sustainable global development. In view of our responsibility regarding the challenges of development we shall strengthen cooperation and coordination between us to achieve these goals. We commit to embark on a high-level dialogue on specific challenges as proposed by the G8 (Heiligendamm Process) as a follow up to continue our discussion in a more structured manner for a period of two years until the G8 Summit in 2009 where we will review the progress made on the following issues: Promoting cross border investment to our mutual benefit, Promoting Research and Innovation, Development, particularly Africa, and Sharing Knowledge for improving **Energy Efficiency**.

2008 Hokkaido-Toyako, Japan

World Economy

Global Growth

1. We remain positive about the long-term resilience of our economies and future global economic growth. Emerging market economies are still growing strongly though our growth has moderated. However, the world economy is now facing uncertainty and downside risks persist. Among others, we express our strong concern about elevated commodity prices, especially of **oil** and food, since they pose a serious challenge to stable growth worldwide, have serious implications for the most vulnerable, and increase global inflationary pressure. We are determined to continuously take appropriate actions, individually and collectively, to ensure stability and growth in our economies and globally.

2. We are mindful of the inter-related nature of the issues surrounding the world economy. We remain committed to promoting a smooth adjustment of global imbalances through sound macroeconomic management and structural policies in our countries as well as in emerging economies and **oil producing countries**. In some emerging economies with large and growing current account surpluses, it is crucial that their effective exchange rates move so that necessary adjustment will occur. We will promote continued consultation with our partner countries.

Energy Security

11. We reaffirm our commitment to the **St. Petersburg Global Energy Security Principles** and the implementation of its Plan of Action and invite other countries to embrace these Principles. We therefore compiled national reports, with the assistance of the **International Energy Agency (IEA)**, evaluating our efforts to adhere to those principles and welcome the corresponding overview provided by the IEA. We are committed to updating our reports for 2009 Summit.

12. We have strong concerns about the sharp rise in oil prices, which poses risks to the global economy. Concerted efforts are needed to address the underlying causes for the benefit of all. On the supply side, production and refining capacities should be increased

in the short term. Joint efforts are also necessary to expand upstream and downstream investment in the medium term. **Oil-producing countries** should ensure transparent and stable investment environments conducive to increasing the production capacity needed to meet rising global demand. On the demand side, it is important to make further efforts to improve **energy efficiency** as well as pursue energy diversification.

In reconfirming the shared interest and responsibility of **energy producing and consuming** countries in promoting **global energy security**, we will enhance further dialogue and partnership. In this regard, as a follow-up to the recent Jeddah Energy Meeting, we look forward to the meeting to be held in London later this year. Also, we encourage major countries that are not **IEA** members to deepen their dialogue with the IEA, including through active participation in IEA programs, as appropriate.

13. To enhance **energy security**, we propose holding an energy forum to focus on **energy efficiency** and new technologies, which could also contribute to dialogue between producers and consumers.

14. Greater transparency will lead to better functioning **energy markets** and hence a better balance between supply and demand. Therefore, we need to improve collection and timely reporting of market data on oil and develop shared analysis of oil market trends and outlook. We therefore continue to strongly support the Joint Oil Data Initiative (JODI) as a significant contribution in the efforts for information sharing including on oil stocks among energy producers and consumers. We support the efforts of the JODI partner organizations including the International Energy Forum (IEF) to realize further progress of JODI in terms of quality, completeness and timeliness of information. We stress the importance of energy markets which send undistorted price signals and are free from any political pressure. We welcome the G8 Finance Ministers' request to the IMF and the IEA to jointly carry out further analysis of real and financial factors behind the recent surge in oil and commodity prices, their volatility, and the effects on the global economy. We also welcome the efforts taken by relevant national authorities for increased transparency of commodity futures markets and encourage further cooperation between them.

Heiligendamm Process

21. We welcome the progress of the Heiligendamm Process, the topic-driven political dialogue on an equal footing between the members of the G8 and major emerging economies to enhance mutual confidence and understanding and to develop a true partnership focusing on investment, innovation, **energy efficiency** and development. We look forward to discussing these issues reflected in the interim report with the leaders of Brazil, China, India, Mexico and South Africa on 9 July. We reiterate our commitment to the Process and look forward to receiving a comprehensive concluding report at the G8 Summit in 2009. We appreciate the OECD for providing organizational and technical support for the dialogue.

Climate Change

23. We are committed to avoiding the most serious consequences of climate change and determined to achieve the stabilization of atmospheric concentrations of global

greenhouse gases consistent with the ultimate objective of Article 2 of the Convention and within a time frame that should be compatible with economic growth and energy security. Achieving this objective will only be possible through common determination of all major economies, over an appropriate time frame, to slow, stop and reverse global growth of emissions and move towards a **low-carbon** society. We seek to share with all Parties to the UNFCCC the vision of, and together with them to consider and adopt in the UNFCCC negotiations, the goal of achieving at least 50% reduction of global emissions by 2050, recognizing that this global challenge can only be met by a global response, in particular, by the contributions from all major economies, consistent with the principle of common but differentiated responsibilities and respective capabilities. Substantial progress toward such a long-term goal requires, inter alia, in the near-term, the acceleration of the deployment of existing technologies, and in the medium- and long-term, will depend on the development and deployment of **low-carbon** technologies in ways that will enable us to meet our sustainable economic development and **energy security** objectives. In this regard, we emphasize the importance and urgency of adopting appropriate measures to stimulate development and deployment of innovative technologies and practices.

26. We recognize the importance of setting mid-term, aspirational goals for energy **efficiency**. In national goals and objectives, as well as in country specific action plans, we will maximize implementation of the IEA's 25 recommendations on energy efficiency.

We welcome the recent decision to establish the **International Partnership for Energy Efficiency Cooperation** (IPEEC), of which the terms of association will be determined by the end of this year, as a high level forum for enhancing and coordinating our joint efforts to accelerate the adoption of sound **energy efficiency** improvement practices.

We invite all interested countries to join those efforts.

27. We promote **clean energy**, given its importance in tackling climate change and for the enhancement of **energy security**, by setting national goals and formulating action plans followed by appropriate monitoring. We believe that there are significant and growing economic and employment opportunities in this sector.

We recognize the important role of **renewable energy** in tackling climate change and in the long term reducing our dependency on fossil fuels.

We underscore the importance of sustainable biofuel production and use. The same should apply for the broader use of biomass for **fuel**, heat and electricity. We support the work of the "**Global Bioenergy Partnership**" (GBEP) and invite it to work with other relevant stakeholders to develop science-based benchmarks and indicators for biofuel production and use. We are committed to continuing research and development of second generation biofuel technologies.

28. We witness that a growing number of countries have expressed their interests in nuclear power programs as a means to addressing climate change and **energy security**

concerns. These countries regard nuclear power as an essential instrument in reducing dependence on **fossil fuels** and hence greenhouse gas emissions. We reiterate that safeguards (nuclear nonproliferation), nuclear safety and nuclear security (3S) are fundamental principles for the peaceful use of nuclear energy. Against this background, an international initiative proposed by Japan on 3S-based nuclear energy infrastructure will be launched. We affirm the role of the International Atomic Energy Agency (IAEA) in this process.

31. We will establish an international initiative with the support of the **IEA** to develop roadmaps for innovative technologies and cooperate upon existing and new partnerships, including carbon capture and storage (CCS) and advanced **energy technologies**. Reaffirming our Heiligendamm commitment to urgently develop, deploy and foster **clean energy** technologies, we recognize and encourage a wide range of policy instruments such as transparent regulatory frameworks, economic and fiscal incentives, and public/private partnerships to foster private sector investments in new technologies. We strongly support the launching of 20 large-scale CCS demonstration projects globally by 2010, taking into account various national circumstances, with a view to beginning broad deployment of CCS by 2020.

To accelerate these and other efforts, we are committed to increasing investment in both basic and applied environmental and **clean energy** technology research and development (R&D), and the promotion of commercialization including through direct government funding and fiscal measures to encourage private sector investment. In this respect, G8 members have so far pledged over the next several years over US\$10 billion annually in direct government-funded R&D. We also agree to take various policy and regulatory measures to provide incentives for commercializing these technologies.

We note the opportunity to promote research on complementary technological approaches which may contribute towards maintaining a stable climate.

32. Substantial finance and investments will be needed to meet the urgent challenges of mitigation, adaptation and access to **clean energy** in developing countries. While the main sources of finance will be the private sector, public resources are essential to help the poorest and to leverage private resources, notably by financing incremental costs and can be very effective in inducing emissions reduction when national policies provide incentives for low carbon investment. In this regard, we welcome and support the establishment of the Climate Investment Funds (CIF) including the Clean Technology Fund (CTF) and the Strategic Climate Fund (SCF), administered by the World Bank. G8 members have thus far pledged approximately US\$ 6 billion as an ODA contribution to the funds and welcome commitments from other donors. The CIF will scale up public and private finance. They will have broad-based and inclusive governance mechanisms and, as an interim measure, fill an immediate financial gap for urgent actions until a new financial architecture under the post-2012 regime is effective. The CTF will aim to promote **low-carbon** economies by helping to finance deployment in developing countries of commercially available cleaner energy technologies through investments in support of credible national mitigation plans that include low-carbon objectives. The SCF will help more vulnerable countries develop climate-resilient economies and take actions

to prevent deforestation, and could provide helpful lessons in the context of discussions on post-2012 financing arrangements. These funds will complement existing multilateral efforts, including the Global Environmental Facility (GEF), which plays the key role as the main financial instrument of the UNFCCC and which we are committed to reinforcing. We also welcome various bilateral financial initiatives taken by G8 members, including public/private partnerships capable of generating additional investment. We expect such financial assistance to be delivered in a coordinated manner and encourage active engagement by developing countries in an effective post-2012 framework.

35. We welcome the final report of the Gleneagles Dialogue on Climate Change, **Clean Energy** and Sustainable Development. We also welcome the reports submitted by the IEA and the World Bank on their work related to the Gleneagles Plan of Action and continue to cooperate with those organizations. We value the useful exchange of views both between member countries and also business and civil society participants and acknowledge the role that further exchanges of this nature can play in supporting action on climate change and the UNFCCC process.

We note the significant progress made by the multilateral development banks on the **Clean Energy Investment Framework (CEIF)** agreed at Gleneagles and welcome their joint level of ambition to mobilize public and private investments of over US\$100 billion up to 2010 from within existing resources. We call upon these Banks to build on the CEIF to develop comprehensive strategies to guide the integration of climate change into their development work and to set specific targets for low carbon investments like **renewable energy**.

Development and Africa: Towards a Vibrant Africa

51. Reaffirming that principles of ownership and partnership are essential for African development, we agree that the following points, inter alia, are critical both to generating private sector-led economic growth and achieving the MDGs:...

(d) development of infrastructure, in particular road and **power networks**, focusing on trans-national solutions and coordination through the Infrastructure Consortium for Africa together with private financing,

(e) increasing access to electricity in order to overcome **energy poverty**;...

2009 L'Aquila, Italy

G8 Leaders Declaration: Responsible Leadership for a Sustainable Future

10. The current financial and economic crisis has reinforced the need generally for cooperation among key economies. The Heiligendamm Dialogue Process (HDP), a topic-driven dialogue of the G8 with major emerging economies – China, India, Brazil, Mexico and South Africa – established in 2007, has helped to fulfil this role by serving as a platform to develop common understanding and shared responsibility in responding to the challenges of the world economy concerning investment, innovation, development and **energy efficiency**, which will be important for global economic growth going

forward. The dialogue has helped to gain a shared understanding of these global challenges in order to find appropriate responses. We endorse the results achieved until now and call for an extension of this dialogue among equals.

Green Recovery

39. The emergency response to the economic crisis should not overlook the opportunity to facilitate a global green recovery putting our economies on a path towards more sustainable and resilient growth. Our fiscal stimulus packages are increasingly investing in measures encouraging the creation of green jobs and low-carbon, **energy efficient** and sustainable growth. These include **energy efficiency measures**, investment in public transportation infrastructure, incentives for **fuel-efficient** vehicles, research in **alternative sources of energy**, support for **renewable energy** technologies, as well as in enhanced CO₂ reduction, recycling and disposal such as Carbon Capture and Storage. We remain committed to enhance the environmental dimension of budgetary measures and to reinforce efforts to promote **clean energy** and **energy efficiency**. Along with the ongoing WTO negotiations on the liberalization of environmental goods and services, we will intensify efforts to make progress on the reduction or elimination of trade barriers on a voluntary basis on goods and services directly linked to addressing climate change, as agreed at the Toyako Summit. At the same time, we will ensure proper regulatory and other frameworks facilitating transition towards **low-carbon and resource efficient** growth. In this light, we call for a reduction of subsidies that artificially encourage carbon-intensive **energy consumption**.

Energy Security, Global Energy Markets and Investment Climate in the Energy Sector

40. The current financial and economic crisis should not delay cost-effective investments or programmed **energy projects** that would create jobs, enhance energy security and help limit greenhouse gas emissions in the short and medium term. We urge all countries and the private sector to adopt a long-term view in planning their investments. We are committed to promoting economic recovery together with a significant change in investment patterns that will accelerate the transition towards **low-carbon, energy efficient** growth models. We especially encourage more rapid application of the many cost-effective technologies already available to improve the **energy efficiency** of power generation facilities, buildings, industry and transport. Accelerated investment in low-carbon technologies is needed to minimize the existing and potential carbon lock-in represented by capital stock in buildings, factories, vehicles and electric **power generating** facilities.

41. In this context, we reaffirm our strong commitment to implement the **St. Petersburg Principles on Global Energy Security** in our countries and call on others to join us in this effort. We invite the major **international energy organisations** to review and update their programmes and promote them in light of the changing **energy challenges**.

42. Unpredictable **energy markets** and highly volatile prices put at risk the ability of the industry to plan and implement investments in new infrastructures, consistently with long term demand dynamics. It is in the interest of both producers and consumers to enhance transparency and to strengthen their dialogue towards reducing excessive volatility in the market. **Fossil fuel** producing, transit and consuming countries must work together to

increase stability and predictability of supply and demand patterns and promote investments in the **energy sector**, including by supporting and developing further predictable legal and regulatory frameworks. We welcome the progress made and the follow up initiatives of the **Jeddah and London Energy Meetings** in identifying obstacles to efficient energy markets. We call for better coordination among the international institutions and for the acceleration and strengthening of the existing initiatives towards a more structured dialogue, based on the outcome of the London Energy Meeting, between producing, transit and consuming countries, focused on improving the investment climate, discussing ways to reduce excessive volatility of prices and promoting **energy security**. To this effect we support the important work undertaken by the **International Energy Agency (IEA)** and the **International Energy Forum (IEF)**, including the activities of the High Level Steering Group of the IEF. We ask experts within the IEF to assess different options to reduce excessive volatility in **oil prices**.

43. Besides stable and predictable regulatory frameworks, transparent and well-functioning **energy markets** are essential prerequisites for reducing investment risks and uncertainties both in producing and consuming countries. We therefore emphasise the need for timely and reliable data on demand, supply, stocks, spare capacity and investment plans. To this end, we continue to strongly support the **Joint Oil Data Initiative (JODI)**, managed by the **IEF**, and call for all countries to cooperate in improving quality, completeness and timeliness of data. We also strongly support the IEF's work on initiating the collection of annual data on investment plans. We believe that greater transparency in gas markets is required. We therefore call upon the IEF to examine the possibility of extending JODI-type activities to **natural gas**.

Sustainable Use of Natural Resources: Climate Change, Clean Energy and Technology

60. The interlinked challenges of climate change, **energy security** and the sustainable and efficient use of **natural resources** are amongst the most important issues to be tackled in the strategic perspective of ensuring global sustainability. A shift towards **green growth** will provide an important contribution to the economic and financial crisis recovery. We must seize the opportunity to build on synergies between actions to combat climate change and economic recovery initiatives, and encourage growth and sustainable development worldwide.

61. Science clearly shows that anthropogenic greenhouse gas emissions – mainly produced by the use of **fossil fuels** - are provoking dangerous climate change, putting at risk not only the environment and ecosystem services but the very basis of our present and future prosperity. The costs of inaction far outweigh the costs of moving towards **low-carbon** societies. At the same time, stable and **secure energy availability** is indispensable for social and economic development; it is essential to ensure **global energy security** and **energy access** in developing countries, particularly the most vulnerable. Immediate and resolute action is needed by all countries to build on existing and new technologies and to design and deliver innovative economic, environmental and **energy policies**.

62. We emphasise the paramount importance of technology development and diffusion on a global scale in meeting these challenges and accelerating the economic recovery, while moving towards a **low-carbon** society. It is indispensable to encourage efficient markets, competitive frameworks and consistent public policies, to enhance investments in **energy efficiency**, clean technologies and **renewable energies**, which will in turn create opportunities for businesses worldwide. We will take the lead in accelerating the transition towards a low-carbon economy based on **green**, sustainable **growth**, reflecting the need to lower dependence on traditional **energy sources**. We reiterate the commitment made at the London Summit to make the best possible use of our fiscal stimulus programmes, also in light of the deliberations of the G8 Environment Ministerial in Siracusa and the **G8 Energy Ministerial** in Rome, and will ensure that such packages will contribute substantially towards building new, cleaner economies that will create new jobs and bring about a **green** and sustainable recovery. We call upon other countries to join us in this endeavour.

Climate Change and Environment: Fighting Climate Change

64. We reconfirm our strong commitment to the UNFCCC negotiations and to the successful conclusion of a global, wide-ranging and ambitious post-2012 agreement in Copenhagen, involving all countries, consistent with the principle of common but differentiated responsibilities and respective capabilities. In this context we also welcome the constructive contribution of the **Major Economies Forum on Energy and Climate** to support a successful outcome in Copenhagen. We call upon all Parties to the UNFCCC and to its Kyoto Protocol to ensure that the negotiations under both the Convention and the Protocol result in a coherent and environmentally effective global agreement.

Promoting the Role of Markets to Reduce Emissions

67. We believe that efficient markets, including **carbon markets**, supported by stable and predictable regulatory frameworks, are central to achieving these objectives. A wide range of competitive instruments and mechanisms, such as emissions trading schemes and performance-based regulation, constitute some of the most flexible and cost-effective means to foster economically sound **investments in energy efficiency**, **renewable energy**, clean and innovative technologies. Other measures, including, where appropriate, incentives, fees, emission and other taxes, progressive reduction of **fossil fuel** subsidies, consumer labelling, innovative financing mechanisms and public-private partnerships, designed and applied consistently with our international obligations, can also be useful in the context of policies that promote **green** and sustainable **development** models and accelerate the transition towards a **low carbon** society.

68. The elimination or reduction of tariff and non-tariff barriers to trade in environmental goods and services is essential to promote the dissemination of **cleaner low-carbon energy technologies** and associated services worldwide. Efforts should be intensified to ensure a successful outcome of the ongoing WTO negotiations on the liberalisation of environmental goods and services. Carbon leakage is an important issue to tackle. It must be addressed in a WTO compatible way. We support the aim of a comprehensive global agreement at Copenhagen, which we believe to be the most appropriate way to deal with any carbon leakage issues that may arise.

71. Sectoral approaches can be useful tools to facilitate progressive involvement by emerging economies and reinforce economy-wide mitigation policies of developed countries. Analysis has highlighted the potential to curtail emissions by focusing on specific sectors and we welcome the ongoing work of the **International Energy Agency (IEA)** and others in this respect.

Technology Development and Research

73. The development and deployment of technologies and know-how in developed and developing countries will play a crucial role both in mitigation and adaptation to climate change and in moving towards **low-carbon** growth models. It is essential to substantially improve **energy and resource efficiency** in key sectors, as well as to develop and disseminate low-carbon technologies, in particular renewable energy. In this context, we stress the critical role of an efficient system of intellectual property rights (IPR) to foster innovation. Capitalizing on new technologies will require a major scientific effort and policy initiatives. Building on our existing commitments to urgently advance the development and deployment of **clean energy technologies**, consistent with existing international obligations, we will:

b. further promote international participation and cooperation in R&D activities and to this end we invite the **IEA** to further define its proposal for an international low-carbon energy technology platform;

c. promote technology roadmaps, such as those being prepared by the **IEA**, to further the development and demonstration of innovative technologies;...

Clean and Accessible Energy

84. Together with climate change, long term sustainable development models for all countries must also address the fundamental issues of energy availability - particularly through **clean energy** - and **energy poverty**. Fostering investments in energy infrastructures, **energy efficiency**, diversification of the **energy mix** and technological innovation is key to ensuring **secure, clean and affordable energy** to long term world needs, while substantially curbing **carbon** emissions.

85. We will support and improve international predictable legal and regulatory frameworks as an essential prerequisite for well functioning **energy markets** and for reducing investment risks and uncertainties in producing, transit and consuming countries.

Energy Efficiency, Diversification of the Energy Mix and Technology

86. We recognise the need to scale up investments in **energy infrastructures** and technological innovation, and to adapt regulatory and institutional frameworks where necessary, to increase **energy diversification** and improve **energy efficiency**, as the most cost-effective means of reducing emissions and driving a **green recovery** while substantially improving **energy security**. We reaffirm the significance of **energy saving and efficiency** programmes. To this end we:

a. commit to design and implement effective policies to improve **energy efficiency** in all the main sectors of our economies, and to actively promote conservation and **energy efficiency** among consumers;

b. support the **IEA's** ongoing work on identification and dissemination of best practices, standards and recommendations for increasing **energy efficiency**.

87. We welcome the operational launch of the **International Partnership for Energy Efficiency Cooperation (IPEEC)**, with a substantive agenda for promoting **energy efficiency**, and:

a. look forward to activities as envisaged in the IPEEC work plan to help countries implement **energy efficiency** policies and to further information on a Global Energy Efficiency Action Initiative, taking into account the 25 recommendations of the **IEA**, and ask **IPEEC** to report back to the G8 Summit in France in 2011;

b. ask **IPEEC** to incorporate the Sustainable Buildings Network, successfully developed as an important result under the **energy** pillar of the Heiligendamm Dialogue Process to exploit the potential of **energy efficiency** in residential, commercial and industrial buildings, and with a view to present its findings to the G8 Summit in France in 2011.

88. A comprehensive strategy to ensure sustainable development and long-term **energy security** must envisage a portfolio of different **energy sources**. In the context of diversification of the **energy mix**, **renewable energies** will play an essential role, as these meet the dual challenge of reducing emissions and lowering **fossil-fuel** consumption and dependence. We will:

a. improve policy and regulatory frameworks in order to boost investments in **renewable energies**, and promote their deployment and diffusion also in emerging and developing countries;

b. continue to support international cooperation and partnerships on **renewable energies**. We note with interest the launch of the **International Renewable Energy Agency (IRENA)** which we invite to cooperate with other international organisations to actively promote the deployment of **renewable energies**;

c. promote research and development of and investment in **smart grids**, as a means to accelerate efficient and secure integration of **renewable energy** sources and distributed generation into the electricity system and enhance **energy efficiency**;

d. support regional initiatives aiming at promoting renewable energy and low carbon technologies, such as the Mediterranean Solar Plan and the Asia-Pacific Partnership on Clean Development and Climate;

e. considering the importance of further developing sustainable **bioenergies** and **alternative fuels** we welcome the work of the Global Bioenergy Partnership (GBEP) in developing a common methodological framework to measure greenhouse gas emissions from biofuels and invite GBEP to accelerate its work in developing science-based

benchmarks and indicators for sustainable biofuel production and to boost technological cooperation and innovation in **bioenergy**.

89. We witness that a growing number of countries have expressed interest in nuclear power programmes as a means to address climate change and **energy security** concerns. In the opinion of these countries, **nuclear energy** can play an essential role, as it meets the dual challenge of reducing greenhouse gas emissions and lowering **fossil-fuel** consumption. We reaffirm that the fundamental prerequisite for the peaceful use of **nuclear energy** is the international commitment to safeguards/non proliferation, safety and security (3S). In close collaboration with the International Atomic Energy Agency (IAEA), we will continue to promote the development and implementation of robust international treaties, standards, recommendations, and monitoring procedures both at international and national levels. In this context, we promote international collaboration at all levels, including cost-benefit analysis, research, infrastructure and human resources development, plant construction, operation, decommissioning and waste management, in order to ensure the highest technically available safety and security standards and accelerate further development and deployment of innovative technologies. We stress the key role played by the IAEA in promoting the highest standards of non proliferation, safety and security. We call on all countries interested in the civil use of **nuclear energy** to engage in constructive international cooperation.

91. We are aware that despite effective diversification strategies, **fossil fuels** will continue to be an essential component of the **energy mix** in many countries, at least in the medium term. The development and deployment of innovative technologies such as Carbon Capture and Storage (CCS) is therefore expected to contribute substantially to reducing emissions. Reaffirming the commitment made in Toyako for the launch of 20 large-scale Carbon Capture and Storage demonstration projects globally by 2010, we will:

b. encourage greater involvement of developing countries by promoting collaboration and knowledge diffusion, also through **IEA** regional roundtables;

c. invite the **IEA**, together with the Carbon Sequestration Leadership Forum (CSLF), to report on and further develop technology roadmaps and to work with the private sector to accelerate the construction and operation of demonstration projects. To this end, we welcome the work on criteria by the IEA to facilitate tracking of global progress on these projects in view of an update to be presented at our Summit in 2010;.

Combating Energy Poverty

92. Access to modern **energy services** is essential for human and social development, and for the achievement of the MDGs. **Energy access and availability** are tightly interlinked with the improvement of living conditions, both in rural and urban areas, providing for cleaner water, more effective sanitation and health services, better education systems and other essential services. Moreover, **energy input** for productive uses is crucial for job creation and income generation.

93. Noting that **energy poverty** remains widespread in many areas, most notably in Africa and Asia, we support the launch, together with interested countries, of the **Expert-**

Level Working Group on Energy Poverty following the proposal made at the G8 Energy Ministers Meeting in Rome, and encourage it to submit a report before the 2010 Muskoka Summit. We are committed to take swift, resolute action, with developing country governments, international financial institutions, local communities and the private sector. Building upon previous commitments, we will:

a. promote the development of transparent national policies able to effectively use public resources and attract and stimulate private sector investments in rural electrification and the deployment of **renewable energy** systems and alternative cooking technologies and **fuels**;

c. ensure that work to improve **energy access** contributes to put developing countries on the path to **low-carbon** development, by reducing high carbon lock-in, as well as supporting exploitation of new technologies, improved **energy security** and **off-grid access** in remote areas;

d. enhance capacity building initiatives, aimed at increasing **energy efficiency**, diffusion of **renewable energies** and efficient use of **natural resources**;

e. enhance capacity building initiatives for the sustainable development and deployment of **oil, natural gas** and **electricity** regional **energy networks**;

f. stimulate the mobilisation of increased financing for **energy access**, including through the improvement of investment conditions.

Political Issues

Afghanistan and Pakistan: Regional Dimension

...We welcome the conclusions achieved in Trieste with regard to closer cooperation in border management, illicit trafficking in narcotics and weapons, trade liberalization and facilitation as a driver for economic growth, the return in dignity and the reintegration of refugees and IDPs, agricultural development as a key to Afghan and regional progress and stability, infrastructure links and **energy cooperation** for greater integration, role of civil societies, enhancement of human capital and effective access to economic and social opportunities.

Joint Statement (G8 and G5): Promoting the Global Recovery

1. We, the Leaders of Italy, Brazil, Canada, the People's Republic of China, France, Germany, India, Japan, Mexico, Russia, South Africa, the United Kingdom, the United States of America and the President of the European Commission, together with the Leaders of Egypt and Sweden, as President of the European Council, commit to work together on global challenges and to improve international governance. Our purpose is to foster a genuine partnership, in the context of a strengthened multilateralism. We will cooperate to ensure that the global economy resumes growth along a balanced, equitable and sustainable path for the benefit of all, especially the most vulnerable. We will resist protectionism and promote open markets for trade and investment. We will contribute to ensuring food security and **energy security**. We will support developing countries in withstanding the impact of the crisis and restoring conditions for their future progress.

We share a common vision on development and will mobilise resources to respond to the development emergency and to advance in the achievement of the internationally agreed development goals including the Millennium Development Goals (MDGs).

Discussing a Global Recovery Agenda for Balanced, Inclusive and Sustainable Growth

We are committed to working together to ensure a **green global recovery** based on firm and lasting foundations for sustainable, balanced, innovative and inclusive growth in the medium term. We have discussed a global recovery agenda and future sources of growth, both in terms of macroeconomic patterns and of structural issues. To this end:...

- We will encourage and facilitate the development, dissemination and mutually agreed transfer of **clean, low-carbon** technologies, reducing carbon emissions and increasing **energy efficiency** from production to consumption, thereby improving energy security and access. We reconfirm our political will for reaching a comprehensive, fair, effective, agreed outcome, following the principle of common but differentiated responsibilities and respective capabilities at the UN Framework Convention on Climate Change Conference in Copenhagen in December.

Annex 1: Concluding Report of the Heiligendamm Process

1. At the German Summit in Heiligendamm 2007, the Heads of State and Government of the G8 and the G5 started a new partnership — the Heiligendamm Dialogue Process (HDP) — in order to discuss crucial challenges of the world economy, in particular in the following four fields:

- Development, with a special focus on Africa;
- Promoting cross-border investment to mutual benefit;
- Promoting research and innovation, including intellectual property rights (IPRs);
- **Energy**, with special focus on **energy efficiency**.

It was agreed that a substantive concluding report on the progress of the Dialogue would be presented to Leaders at the 2009 Summit in Italy.

2. The HDP has been steered by the Personal Representatives of the Leaders — the Sherpas — and carried forward by the respective working groups in an open, transparent and constructive manner. As a non-negotiating process on an equal footing, the HDP has complemented work in other multilateral and regional institutions and fora and has contributed to advance the search for mutually beneficial solutions to common challenges. The OECD and the IEA have supported the HDP through their analyses and expertise and this is appreciated.

IV. Energy

32. Energy is crucial for global prosperity and sustainable development. Dialogue Partners acknowledge the close relationship between security of **energy supply and demand**, **energy efficiency**, **renewables** and **access to energy**. The Dialogue has provided an opportunity to discuss and develop common understanding on these key

aspects of **energy policies**, with a focus on **energy efficiency**, all of which are also crucial for mitigating climate change and achieving the Millennium Development Goals. Partner countries have discussed relevant aspects of **energy security** as contained in the Summit Declaration of St. Petersburg as well as proposed by the G5 countries. They recognise that energy markets are increasingly global and interdependent, and call for concerted efforts for enhanced international, including multilateral, cooperation to address common challenges.

33. The Dialogue has concentrated on **energy policy** issues that have substantial potential to influence **energy security**, specifically increased **efficiency in coal-fired power generation**, the creation of a Sustainable Buildings Network (SBN) and the promotion of **renewable energy**. The Dialogue Partners recognise that technical and cost-effective progress in these areas depend on national circumstances. They agree to improve cooperation to achieve progress. The Dialogue Partners also recognise the need in all of these areas to develop technologies that are affordable and suitable to the conditions of developing countries, and to facilitate access to these technologies.

34. The financial crisis is substantially changing conditions in both short and long term **energy markets**. Now more than ever, investments in the energy sector are fundamental to secure **sustainable, affordable and diversified sources of energy**. In particular, investments in energy efficiency and in **renewables** can play a critical role in supporting economic recovery and growth by creating employment and setting the foundations for sustainable development. Dialogue Partners agree that an inclusive, **green** and sustainable **recovery** should be a key objective. This requires consistent policy frameworks which promote predictability for investors, as well as development, diffusion and access to technologies.

Retrofit of coal-fired power plants

35. **Coal** will continue to play an important role for economic growth and development for most of our countries and is one of the most affordable sources of **energy**. It is, however, the most **carbon-intensive fossil fuel** and the increase in consumption of **coal** for **electricity** production over the next decades will pose a major challenge with regard to greenhouse gas emissions. While agreeing that a broad range of instruments can be deployed to achieve **energy efficiency**, the Dialogue Partners recognise the urgency in a shorter term perspective of taking measures to increase **efficiency in existing coal-fired power plants** through retrofit of plant and equipment. The Partners note the **IEA** estimate that a 1 % increase in plant efficiency can lead to a 2.5% decrease in greenhouse gas emissions. **Retrofit** has the potential to become an important element in an overarching **energy policy** to manage **resources**, improve **energy security** and address climate change.

36. Dialogue Partners agree that plant-specific benchmarking, targeted incentives and appropriate regulatory frameworks can encourage implementation of **efficiency improvements** through **retrofitting**, including appropriate maintenance of existing **power stations**. The Dialogue has provided a welcome opportunity to share experiences and good practices in this field, as a basis for developing policy instruments, including

the promotion of capacity building measures, and for identifying concrete action and suitable incentive mechanisms.

Energy-efficient and Sustainable Buildings

37. Dialogue Partners agree that there is significant potential in Partner countries for **energy efficiency** improvements in buildings, including appliances and equipment, with positive impacts on the climate and the environment, economic growth and employment, as well as on **energy security**. They therefore commit to promoting **energy-efficient and sustainable buildings** and endorse the creation of a Sustainable Buildings Network (SBN), open to all interested countries and stakeholders.

38. Partners acknowledge the value of this “network of networks”, which should invite interaction and co-ordination among all relevant actors in this field; build and maintain a central database on new technologies and policies; disseminate best-practice examples; and offer evidence-based policy advice. Dialogue Partners acknowledge that technological solutions for increased efficiency in buildings are available. They recognise the need for sharing experiences on technological, regulatory and implementation best practices. The central mission for the Network will be to facilitate and support policies for **energy efficiency in buildings** globally.

39. Dialogue Partners agree to move forward on the SBN. As agreed at the **Energy Ministerial** meeting, appropriate institutional linkages should be developed between the **International Partnership for Energy Efficiency Cooperation (IPEEC)** and SBN in order to realise synergies and maximise efficiency. The Network will be launched through a high-level kick-off conference in the latter part of 2009 by the Italian G8 Presidency. Subsequent periodic high level conferences should aim at maintaining political momentum and at drawing global attention to **energy efficiency in buildings**.

Renewable energy

40. To complement energy efficiency, the Dialogue Partners recognise that increasing the share of **renewables in the energy-mix** is essential for moving towards a low-carbon economy. A diversified basket of **renewable energy technologies** also contributes to more reliable and sustainable energy supply. However, some **renewables** are not competitive with **traditional sources of energy**. Transitional policy support is needed to foster the development and large-scale deployment of **renewables** in effectively operating markets.

41. Globally, investment in **renewables** is slowing down as a consequence of the economic downturn. In this context, Partners recognise the urgent need to reinforce their efforts and welcome the inclusion of **renewable energy** in economic stimulus plans as a contribution to a **green economic recovery**. Investment in research and development can play an important role in this regard. Moreover, deployment of **renewables** has socio-economic benefits that contribute to sustainable development.

42. The success of individual **renewable policies** depends primarily on a long-term, comprehensive policy framework, which provides investors with predictable and

consistent signals, and at the same time, addresses non-economic barriers, including integration into the **grid**. This is even more important in view of the economic crisis.

43. There is value in increased international co-operation to exchange experiences and best practices in order to increase deployment of **renewable energy technologies** that support sustainable economic growth and development as well as climate change mitigation.

Annex 2: The Agenda of the Heiligendamm-L'Aquila Process

1. Priorities for the Future

Brazil, Canada, the People's Republic of China, France, Germany, India, Italy, Japan, Mexico, Russia, South Africa, the United Kingdom, the United States of America and the European Commission, hereafter referred to as "the Partners", agree to continue their dialogue as the Heiligendamm – L'Aquila Process (HAP) for two years....The HAP Steering Committee will have the flexibility to take up pressing global challenges. The aim is to address emerging and/or cross-cutting issues which have an impact on global development efforts or on which potential for meaningful collective progress is foreseen. The next meeting of the Steering Committee will decide how best to organize and structure the work within the broad areas.

Possible themes:

- Freedom of investment to mutual benefit.
- The role of innovation and technology in the process of sustainable and socio-economic development.
- A strategic approach to development and its social dimension.
- Assistance to vulnerable states.
- Food security and reform of relevant organisations.

Energy

Other possible issues to be decided by the Steering Committee. Some indications of interest have already been expressed.

Declaration of the Leaders: The Major Economies Forum on Energy and Climate

We, the leaders of Australia, Brazil, Canada, China, the European Union, France, Germany, India, Indonesia, Italy, Japan, the Republic of Korea, Mexico, Russia, South Africa, the United Kingdom, and the United States met as the Major Economies Forum on Energy and Climate in L'Aquila, Italy, on July 9, 2009, and declare as follows:

Climate change is one of the greatest challenges of our time. As leaders of the world's major economies, both developed and developing, we intend to respond vigorously to this challenge, being convinced that climate change poses a clear danger requiring an extraordinary global response, that the response should respect the priority of economic and social development of developing countries, that moving to a low-carbon economy is

an opportunity to promote continued economic growth and sustainable development, that the need for and deployment of transformational **clean energy technologies** at lowest possible cost are urgent, and that the response must involve balanced attention to mitigation and adaptation....

Our vision for future cooperation on climate change, consistent with equity and our common but differentiated responsibilities and respective capabilities, includes the following:

1. Consistent with the Convention's objective and science:

Our countries will undertake transparent nationally appropriate mitigation actions, subject to applicable measurement, reporting, and verification, and prepare **low-carbon growth** plans. Developed countries among us will take the lead by promptly undertaking robust aggregate and individual reductions in the midterm consistent with our respective ambitious long-term objectives and will work together before Copenhagen to achieve a strong result in this regard. Developing countries among us will promptly undertake actions whose projected effects on emissions represent a meaningful deviation from business as usual in the midterm, in the context of sustainable development, supported by financing, technology, and capacity-building. The peaking of global and national emissions should take place as soon as possible, recognizing that the timeframe for peaking will be longer in developing countries, bearing in mind that social and economic development and poverty eradication are the first and overriding priorities in developing countries and that **low-carbon** development is indispensable to sustainable development. We recognize the scientific view that the increase in global average temperature above pre-industrial levels ought not to exceed 2 degrees C. In this regard and in the context of the ultimate objective of the Convention and the Bali Action Plan, we will work between now and Copenhagen, with each other and under the Convention, to identify a global goal for substantially reducing global emissions by 2050. Progress toward the global goal would be regularly reviewed, noting the importance of frequent, comprehensive, and accurate inventories.

3. We are establishing a Global Partnership to drive transformational **low-carbon**, climate-friendly technologies. We will dramatically increase and coordinate public sector investments in research, development, and demonstration of these technologies, with a view to doubling such investments by 2015, while recognizing the importance of private investment, public-private partnerships and international cooperation, including regional innovation centers. Drawing on global best practice policies, we undertake to remove barriers, establish incentives, enhance capacity-building, and implement appropriate measures to aggressively accelerate deployment and transfer of key existing and new **low-carbon technologies**, in accordance with national circumstances. We welcome the leadership of individual countries to spearhead efforts among interested countries to advance actions on technologies such as **energy efficiency**; **solar energy**; **smart grids**; **carbon capture, use, and storage**; advanced vehicles; high-efficiency and lower-emissions **coal** technologies; **bio-energy**; and other clean technologies. Lead countries will report by November 15, 2009, on action plans and roadmaps, and make

recommendations for further progress. We will consider ideas for appropriate approaches and arrangements to promote technology development, deployment, and transfer.

4. Financial resources for mitigation and adaptation will need to be scaled up urgently and substantially and should involve mobilizing resources to support developing countries. Financing to address climate change will derive from multiple sources, including both public and private funds and **carbon markets**. Additional investment in developing countries should be mobilized, including by creating incentives for and removing barriers to funding flows. Greater predictability of international support should be promoted. Financing of supported actions should be measurable, reportable, and verifiable. The expertise of existing institutions should be drawn upon, and such institutions should work in an inclusive way and should be made more responsive to developing country needs. Climate financing should complement efforts to promote development in accordance with national priorities and may include both program-based and project-based approaches. The governance of mechanisms disbursing funds should be transparent, fair, effective, efficient, and reflect balanced representation. Accountability in the use of resources should be ensured. An arrangement to match diverse funding needs and resources should be created, and utilize where appropriate, public and private expertise. We agreed to further consider proposals for the establishment of international funding arrangements, including the proposal by Mexico for a Green Fund.

5. Our countries will continue to work together constructively to strengthen the world's ability to combat climate change, including through the **Major Economies Forum on Energy and Climate**. In particular, our countries will continue meeting throughout the balance of this year in order to facilitate agreement in Copenhagen.

Chair's Summary of the G8-Africa Session at the G8 L'Aquila Summit

3. The G8 and African partners agreed on the importance of continuing to reinforce their partnership, based on mutual accountability and respect, for the common good. In this spirit, they examined the issues on the agenda of their meeting, which are of particular relevance to Africa because of the current international context. Leaders:

c. Discussed the impact of climate change on Africa and agreed on the need to ensure that the specific concerns of developing countries are adequately addressed in the agreement to be reached at the UN Conference in Copenhagen. They recalled the importance of preserving forest cover especially in the Congo Basin region, and addressing **access to energy**.

L'Aquila Joint Statement on Global Food Security: L'Aquila Food Security Initiative (AFSI)

10. We support the implementation of country and regional agricultural strategies and plans through country-led coordination processes, consistent with the Accra Agenda for Action and leveraging on the Comprehensive Framework for Action of the UN High Level Task Force and on existing donor coordination mechanisms. Building on the experience of FAO, IFAD and other Agencies, special focus must be devoted to smallholder and women farmers and their access to land, financial services, including

microfinance and markets. Sustained efforts and investments are necessary for enhancing agricultural productivity and for livestock and fisheries development. Priority actions should include improving access to better seeds and fertilizers, promoting sustainable management of water, forests and natural resources, strengthening capacities to provide extension services and risk management instruments, and enhancing the efficiency of food value chains. In this regard, the increased involvement of civil society and private sector is a key factor of success. Investment in and access to education, research, science and technologies should be substantially strengthened at national, regional and international level. Their dissemination, as well as the sharing of information and best practices including through North-South, South-South and Triangular cooperation, is essential to promote knowledge-based policy and national capacity. We recognize the opportunities and challenges associated with renewable energy production from biomasses. Related investment should be promoted in a sustainable way compatible with our food security goals.

Chair's Summary

The G8 Summit was held in the city of L'Aquila from 8 to 10 July 2009 to show solidarity with the population of the Region, severely hit by an earthquake on 6 April, and with all those around the world who have been touched by natural disasters.

G8 Leaders discussed the interlinked challenges of the economic crisis, poverty, climate change and international political issues. They shared a vision of a world economy that is open, innovative, sustainable and fair.

The following documents have been adopted:

- G8 Declaration “Responsible Leadership for a Sustainable Future”;
- G8 L'Aquila Statement on Non Proliferation;
- G8 Declaration on Counter Terrorism;
- Joint Declaration “Promoting the Global Agenda”;
- **Declaration of the Major Economies Forum on Energy and Climate;**
- Joint G8-Africa Statement (“A Stronger G8-Africa Partnership on Water and Sanitation”);
- Joint Statement on Global Food Security — “L'Aquila Food Security Initiative” (AFSI).

World Economy

... Looking beyond the crisis, Leaders vowed to secure medium-term fiscal sustainability through preparing appropriate exit strategies. They are determined to set economic growth on a more solid, innovative, greener and sustainable path. Leaders also agreed on the need to address excessive **price volatility in energy** and agricultural products and to improve the functioning of global commodity markets, including through effective

regulation and supervision of derivative markets, so as to enhance transparency and combat damaging speculation.

Climate Change

... In the broader session, the 16 **Leaders of the Major Economies Forum on Energy and Climate**, the European Commission, Sweden, Denmark and the UN Secretary General, found an agreement on key pillars of the Copenhagen climate deal.

2010 Muskoka, Canada

Muskoka Declaration: Recovery and New Beginnings

Environmental Sustainability and Green Recovery

24. To address climate change and increase **energy security**, we are committed to **building low carbon** and climate resilient economies, characterized by green growth and improved resource efficiency. We recognize the opportunities provided by a transition to low carbon and **renewable energies**, in particular for job creation. We encourage the **IEA** to develop work on an International Platform for **low-carbon technologies**, in order to accelerate their development and deployment. The elimination or reduction of tariff and non-tariff barriers to trade in environmental goods and services is essential to promote the dissemination of cleaner **low-carbon energy technologies** and associated services worldwide. **Carbon capture and storage (CCS)** can play an important role in transitioning to a **low-carbon** emitting economy. We welcome the progress already made on our Toyako commitments to launch the 20 large-scale **CCS** demonstration projects globally by 2010 and to achieve the broad deployment of **CCS** by 2020, in cooperation with developing countries. Several of us commit to accelerate the **CCS** demonstration projects and set a goal to achieve their full implementation by 2015. We also recognize the role **nuclear energy** can play in addressing climate change and **energy security** concerns, acknowledging the international commitment to safety, security and safeguards for non-proliferation as prerequisites for its peaceful use. We also recognise the potential of **bioenergy** for sustainable development, climate change mitigation and **energy security**. We welcome the work of the **Global Bioenergy Partnership (GBEP)** and commit to facilitating swift adoption of voluntary sustainability criteria and indicators, as well as on capacity building activities.

29. We urge all states to take and support resolute action to address non-compliance with the Treaty's non-proliferation obligations, including safeguards obligations. We call upon states that have not yet done so to conclude a Comprehensive Safeguards Agreement with the **International Atomic Energy Agency**, together with an Additional Protocol, which will become the new universally accepted standard for the verification of peaceful uses of **nuclear energy**. We support the exchange, in conformity with the obligations of the Nuclear Non Proliferation Treaty, of equipment, materials and scientific and technological information for the **peaceful uses of nuclear energy**, in particular for developing countries. We reiterate our commitment as found in paragraph 8 of the L'Aquila Statement on Non-Proliferation. As we approach the 25th anniversary of the Chernobyl accident in 2011, we will take the necessary steps to complete the final stages of the Chernobyl safety and stabilization projects, and we urge all entities to pursue the

highest levels of nuclear safety, security and safeguards when developing new civil nuclear installations.

32. The adoption by the UN Security Council of Resolution 1929 reflects the concerns of the international community on the Iranian nuclear issue, and we call on all states to implement it fully. While recognizing Iran's right to a civilian nuclear program, we note that this right comes with international obligations that all states, including Iran, must comply with. We are profoundly concerned by Iran's continued lack of transparency regarding its nuclear activities and its stated intention to continue and expand enriching uranium, including to nearly 20 percent, contrary to UN Security Council Resolutions and the **International Atomic Energy Agency Board** of Governors. We call upon Iran to heed the requirements of the UN Security Council and the **International Atomic Energy Agency**, and implement relevant resolutions to restore international confidence in the peaceful nature of Iran's nuclear program. Our goal is to persuade Iran's leaders to engage in a transparent dialogue about its nuclear activities and to meet Iran's international obligations. We strongly support the ongoing efforts in this regard by China, France, Germany, Russia, the United Kingdom, the United States and the European Union High Representative, and we welcome their commitment to the resolution of all outstanding issues through negotiation. We also welcome and commend all diplomatic efforts in this regard, including those made recently by Brazil and Turkey on the specific issue of the Tehran Research Reactor.

35. We call on the international community to ensure the comprehensive enforcement of all existing UN Security Council resolutions pertaining to the Democratic Peoples' Republic of Korea... We reaffirm support for efforts to achieve a comprehensive resolution to this threat and to implement the 2005 Joint Statement of the Six Party Talks. Recalling the importance of full and transparent implementation of UN Security Council resolutions, we strongly urge the Democratic People's Republic of Korea to act strictly in accordance with its nuclear safeguards agreement with the **International Atomic Energy Agency**, and to abandon all nuclear weapons and existing nuclear and ballistic missile programs, as well as proliferation activities, in a complete, verifiable and irreversible manner in accordance with UN Security Council Resolutions 1718 and 1874...

2011 Deauville, France

G8 Declaration: Renewed Commitment for Freedom and Democracy

Solidarity with Japan

1. On 11 March, an earthquake and tsunami of unprecedented magnitude struck Japan, taking more than fifteen thousand lives and causing massive destruction and disruption including at the **Fukushima Daiichi nuclear power plant**... The Prime Minister of Japan expressed his deep gratitude for the generous support and friendship extended by G8 members and by the entire international community. He expressed his firm determination to overcome the challenges including the nuclear accident and remain fully engaged with and committed to contributing to the rest of the world.

Green Growth

33. To this end and with a view to encouraging long-term investment, we are deploying a broad set of policies including market-based, regulatory and voluntary measures, and promoting R&D for clean technologies and **energy efficiency**.

36. We strongly support international cooperation on green growth and will intensify our efforts to contribute to progress for the next steps, notably looking toward the June 2012 UN Conference in Rio on sustainable development and various international events planned, including the Bonn Conference on Water, **Energy** and Food Security in November...

37. We believe that it is also crucial to employ a range of measures to encourage **efficient and sustainable resource use**, including **renewable energy**, by national and other actors. We will keep on supporting international initiatives launched by the G8, notably the **International Partnership for Energy Efficiency Cooperation (IPEEC)**, which has successfully been extended to other stakeholders, the **IEA International Low Carbon Energy Technology Platform**, the **Global Bio Energy Partnership (GBEP)**, The Economics of Ecosystems and Biodiversity (TEEB) study, the Intergovernmental Platform on Biodiversity and Ecosystem Services (IPBES), and the **International Renewable Energy Agency (IRENA)**. We reaffirm our support to the Kobe 3R ("Reduce, Reuse, Recycle") Action Plan and welcome the OECD report on its implementation on resource productivity, and invite the OECD to continue to work on this issue.

Nuclear Safety

39. We acknowledge that those countries having chosen to rely on **nuclear energy** already pay due attention to the safe operation of their **nuclear installations**. We recognise that countries may have different approaches regarding the use and contribution of **nuclear energy** to their **energy mix**, including the phasing-in or the phasing-out.

40. The events in Japan confirm that there is a continuing need to re-evaluate safety and we recognise the importance of learning from the **Fukushima** accident and its aftermath. We welcome the initiative taken by many countries to carry out comprehensive risk and safety assessments of their existing nuclear installations, and invite all other countries operating **nuclear power plants** to launch similar assessments as soon as possible. Such assessments should include accident prevention, emergency preparedness, crisis management and mitigation, and post-accident management. All together these measures will contribute to strengthen the safety infrastructure worldwide.

43. We recognise the important role of the **IAEA** for the enhancement of nuclear safety worldwide, and we encourage countries to make use of the relevant **IAEA** capabilities to help enhance the safety of their nuclear installations. We also urge countries that have not yet done so to ratify the relevant international conventions adopted under the auspices of the **IAEA** (Convention on Early Notification of a Nuclear Accident, Convention on Assistance in the Case of a Nuclear Accident or Radiological Emergency, Convention on Nuclear Safety, Joint Convention on the Safety of Spent Fuel Management and on the

Safety of Radioactive Waste Management), which are crucial to the international safety regime.

45. We also recommend that countries embarking on or expanding nuclear programmes should establish the relevant infrastructure, with sufficient and qualified human resources, in accordance with **IAEA** recommendations. We also call on the **IAEA** to consider the relevant **IAEA** standards to identify issues that may warrant examination and revision in light of the **Fukushima accident**, and, in particular, to consider developing or improving additional standards for the construction and operation of **nuclear power plants** in seismically hazardous areas, as well as in areas that might be otherwise exposed to other external events, taking into account their integrated impact.

47. We are committed to promoting the highest levels of safety worldwide consistent with the principles of the Convention on Nuclear Safety, through strengthening of international cooperation on safety practices, crisis management, and transparency. Improvements in nuclear safety will gain from the work already being undertaken by safety authorities and operators in fora such as the Multinational Design Evaluation Programme (MDEP), the Western European Nuclear Safety Regulators' Association (WENRA), the World Association of Nuclear Operators (WANO), as well as by the International Framework for **Nuclear Energy Cooperation (IFNEC)**. We welcome the announcement made by the **IAEA** to convene an international ministerial conference on nuclear safety in Vienna on 20-24 June 2011. We also welcome the initiative of the Presidency to gather the regulatory bodies, as well as ministers, of interested countries, to examine ways to further improve nuclear safety worldwide through contributions to the 20-24 June conference. We expect that discussions to be held in the framework of the **IAEA** for promoting the highest levels of nuclear safety worldwide will bear a fruitful outcome. We ask the Nuclear Safety and Security Group to include these issues in their future work.

51. We are determined to do our part to reach those objectives and move rapidly towards a **low-carbon economy** that will generate significant benefits for the protection of the environment and health, for energy savings and **energy security**, while also delivering job opportunities and growth.

Climate Change and Biodiversity

51. We are determined to do our part to reach those objectives and move rapidly towards a **low-carbon economy** that will generate significant benefits for the protection of the environment and health, for **energy savings and energy security**, while also delivering job opportunities and growth.

Accountability on Development

62. ... We also welcome the complementary efforts to increase revenue transparency, and commit to setting in place transparency laws and regulations or to promoting voluntary standards that require or encourage **oil, gas**, and mining companies to disclose the payments they make to governments.

Peace and Security

71. We are determined to strengthen the global non-proliferation architecture by supporting all relevant multilateral treaties and arrangements and by promoting their implementation and universalization. In this respect, we are committed to maintaining and strengthening the global nuclear non-proliferation regime based on the NPT and its three pillars of non-proliferation, disarmament, and **peaceful uses of nuclear energy**, including by taking the actions in the plan adopted by consensus at the 2010 NPT Review Conference...

72. Iran's persistent failure to comply with its obligations under six UNSC resolutions and to meet the requirements of ten **IAEA Board of Governors** resolutions is a cause of utmost concern. We note with deep concern the recent report by the **IAEA** which underlines that Iran is not implementing a number of its obligations, that areas of concern remain regarding possible military dimensions of **Iran's nuclear programme** and that the **Agency** is therefore unable to conclude that all nuclear material in Iran is in peaceful activities. We recognise Iran's right to the **peaceful uses of nuclear energy** under the NPT, but this right also comes with obligations that all States parties to the NPT, including Iran, have to respect...

74. We note with deep concern the lack of cooperation by Syria reflected in the most recent **IAEA** report. We urge Syria to fulfil its obligations and fully cooperate with the Agency and respond to the **IAEA Director-General's** requests for access and information in order to clarify all outstanding issues. We look forward to the **IAEA Board of Governors** addressing the seriousness of the issue.

76. We fully support the paramount role played by the United Nations Security Council in addressing proliferation issues as well as the key role of the **International Atomic Energy Agency (IAEA)** in assuring the exclusively peaceful nature of nuclear activities. We call on all States that have yet to do so to sign and ratify a Comprehensive Safeguards Agreement together with an Additional Protocol and to bring these agreements into force as their combination is meant to constitute the universally accepted international verification standard.

79. While proliferation must be fought, we ask our experts to explore ways of ensuring fair and responsible access to the benefits of the peaceful uses of technologies and to report back by the next Summit. We support the exchange, in conformity with the obligations of the NPT, of equipment, materials and scientific and technological information for the **peaceful uses of nuclear energy**, in particular for developing countries...

89. We stress the importance of political and economic regional cooperation and developing the rule of law for stability, peace and prosperity in Afghanistan and the wider region. In this respect, we welcome the prospect of increased transborder cooperation on transport, including rail, as well as on water, **energy** and human resources.

G8/Africa Joint Declaration: Shared Values, Shared Responsibilities

Economic Development and Environment

13. Africa is increasingly a destination for foreign investment and private sector development... We need to intensify our efforts on drivers for economic growth, including human capital development, regional and global trade integration, business environment, domestic resources mobilization, and scaling up access to infrastructures and related services, including for **energy**, transport, information and communication technologies. In this regard, we welcome the conclusions of the 16th meeting of the Africa Partnership Forum (APF) on 21 April 2011 in Paris.

21. Limited access to energy along both dimensions – **electricity** and cooking **fuels** – remains a major concern. It is a key bottleneck for economic development and poverty reduction, and the widespread use of traditional cooking **fuels** is at the origin of severe negative health and environmental impacts. We therefore emphasize the need to ensure access to **sustainable energy services**, with a particular focus on **renewable energy sources**. The G8 will continue to support projects for **access to energy**, both decentralised and centralised, notably those with a regional dimension and a sustainable development perspective, as well as cross-border trade and capacity-building initiatives on energy. The African Union-NEPAD Action Plan and the Programme for Infrastructure Development in Africa (PIDA) constitute appropriate frameworks to mobilise foreign direct investment. We stress the need for institutional and regulatory reforms to attract increased investment, notably from the private sector.

2012 Camp David, United States*Camp David Declaration*

Energy and Climate Change

10. As our economies grow, we recognize the importance of meeting our **energy** needs from a wide variety of sources ranging from traditional **fuels** to **renewables** to other clean technologies. As we each implement our own individual **energy** strategies, we embrace the pursuit of an appropriate mix from all of the above in an environmentally safe, sustainable, secure, and affordable manner. We also recognize the importance of pursuing and promoting **sustainable energy** and low **carbon** policies in order to tackle the global challenge of climate change. To facilitate the trade of **energy** around the world, we commit to take further steps to remove obstacles to the evolution of global **energy** infrastructure; to reduce barriers and refrain from discriminatory measures that impede market access; and to pursue universal access to cleaner, safer, and more affordable **energy**. We remain committed to the principles on global **energy** security adopted by the G8 in St. Petersburg.

11. As we pursue **energy** security, we will do so with renewed focus on safety and sustainability. We are committed to establishing and sharing best practices on **energy** production, including exploration in frontier areas and the use of technologies such as deep water drilling and hydraulic fracturing, where allowed, to allow for the safe development of **energy sources**, taking into account environmental concerns over the life of a field. In light of the **nuclear** accident triggered by the tsunami in Japan, we continue to strongly support initiatives to carry out comprehensive risk and safety assessments of

existing **nuclear** installations and to strengthen the implementation of relevant conventions to aim for high levels of **nuclear** safety.

12. We recognize that increasing **energy efficiency** and reliance on **renewables** and other **clean energy** technologies can contribute significantly to **energy** security and savings, while also addressing climate change and promoting sustainable economic growth and innovation. We welcome sustained, cost-effective policies to support reliable **renewable energy sources** and their market integration. We commit to advance appliance and equipment efficiency, including through comparable and transparent testing procedures, and to promote industrial and building efficiency through **energy** management systems.

15. In addition, we strongly support efforts to rationalize and phase-out over the medium term inefficient **fossil fuel** subsidies that encourage wasteful consumption, and to continue voluntary reporting on progress.

Statement by the G8 on Global Oil Markets

There have been increasing disruptions in the supply of **oil** to the global market over the past several months, which pose a substantial risk to global economic growth. In response, major producers have increased their output while drawing prudently on excess capacity. Looking ahead to the likelihood of further disruptions in **oil** sales and the expected increased demand over the coming months, we are monitoring the situation closely and stand ready to call upon the **International Energy Agency** to take appropriate action to ensure that the market is fully and timely supplied.

Group of Eight Declaration on Nonproliferation and Disarmament for 2012

2. We reaffirm our unconditional support for all three pillars of the NPT – disarmament, nonproliferation, and the peaceful uses of **nuclear energy**. The NPT remains the cornerstone of the **nuclear** non-proliferation regime and the essential foundation for the pursuit of disarmament and the peaceful uses of **nuclear energy**. We note that all NPT Parties have a responsibility in preserving and strengthening the international non-proliferation regime and are committed to take appropriate steps to implement its provisions.

10. We welcome the recent meeting of EU High Representative Catherine Ashton, together with the Political Directors of China, France, Germany, the Russian Federation, the United States and the United Kingdom, with the Iranian nuclear negotiator, Dr. Saed Jalili in Istanbul on April 14, 2012. As HR Ashton stated, the discussions on the Iranian nuclear issue were constructive and useful. We expect that subsequent meetings, including the next one to be held in Baghdad on May 23, will lead to concrete steps towards a comprehensive negotiated solution which restores international confidence in the exclusively peaceful nature of the Iranian nuclear programme. We support the agreement that the NPT forms a key basis for what must be serious engagement to ensure that Iran meets all its obligations under the NPT while fully respecting Iran's right to the peaceful use of **nuclear energy** as defined by the NPT. Iran's persistent failure to comply with its obligations under the UN Security Council resolutions and to meet the requirements of the **IAEA** Board of Governors resolutions is the cause of urgent concern. We reaffirm that, based on the principles of a step-by-step approach and reciprocity, our

overall objective is a comprehensive, negotiated solution to the **nuclear** issue leading to Iran's full compliance with UN Security Council resolutions and to the lifting of all sanctions once international confidence in the peaceful nature of Iran's **nuclear** programme is restored. It is essential for Iran, in its separate dialogue with the **IAEA**, to resolve fully and without delay all outstanding issues, including those related to possible military dimensions of its **nuclear** program.

28. Reaffirming the inalienable right of all States Parties to the NPT to use **nuclear energy** for peaceful purposes, in compliance with their international obligations, we reiterate our willingness to cooperate with States that meet their nuclear non-proliferation obligations and wish to develop a civil **nuclear** programme, in order to help them fulfil the essential requirements needed to ensure fair and responsible access to the benefits of the peaceful uses of **nuclear energy**. These requirements include safety, security, non-proliferation, and respect for the environment. Development and application of innovative technology in relevant frameworks has a growing role to play in supplying global demand for energy and also in building up robust and transparent atomic energy infrastructure resistant to nuclear accidents. We underscore the responsibility of governments for timely and sufficient measures on accident prevention and management to minimize the consequences of accidents, should they occur. Efficiency and substance of notifications in case of nuclear accidents should be further improved as well.

29. We acknowledge the useful contribution that multilateral approaches to the **nuclear** fuel cycle provide in the field of **nuclear energy**, in particular the creation of the Uranium Enrichment Centre in Russia, and encourage the **International Atomic Energy Agency's** efforts to continue to address this issue. In this regard, we welcome the creation in accordance with the Russia-IAEA agreement of the Low Enriched Uranium (LEU) reserve in Angarsk, Russia; support the IAEA's decision to establish a bank of LEU for the IAEA member states and welcome Kazakhstan's readiness to provide a site; further welcome the establishment of the American Assured Fuel Supply, comprised of downblended uranium from weapons programs. We support the adoption of a Model Agreement between supplier and recipient States for the **Nuclear Fuel Assurance** initiative, while respecting the normal functioning of the existing market rules.

Fact Sheet: G8 Action on the Deauville Partnership with Arab Countries in Transition
Integration

In response to transition countries' interest in opening up their economies to increased trade and investment with the G8 and each other, G8 members will take the following actions:

- Facilitate closer commercial ties with critical sectors to transition countries. The G8 will co-sponsor investor conferences focused information and communications technology, **renewable energy**, agriculture and food, infrastructure, transportation and tourism in the region with Partnership countries.

Additional Background

It [The Deauville Partnership with Arab Countries in Transition] also includes international financial institutions and organizations committed to supporting reform in

Egypt, Jordan, Libya, Morocco and Tunisia. The African Development Bank is the rotating chairman of the IFI platform that includes: the African Development Bank, the Arab Fund for Economic and Social Development, the Arab Monetary Fund, the European Investment Bank, the European Bank for Reconstruction and Development, the International Finance Corporation, the International Monetary Fund, the Islamic Development Bank, the **OPEC** Fund for International Development, and the World Bank. There are several other organizations that have been supportive of the Deauville Partnership, including, the Arab League, the Organization for Economic Cooperation and Development and the United Nations organizations.

Fact Sheet: G8 Action on Energy and Climate Change

At the Camp David Summit, G8 Leaders recognized that the development of and universal access to environmentally safe, sustainable, secure, and affordable sources of **energy** is essential to global economic growth and to their overall efforts to address climate change. As such, they identified several actions for the G8 to take together:

Pursue a Comprehensive Energy Strategy – Safely

- Recognize the value of simultaneously pursuing a wide variety of **energy sources** in order to meet **energy** demands, acknowledging each nation's different needs and different approaches. In pursuing an appropriate mix from all of the above, we recognize that different **energy sources** have different inherent risks and must be developed in a safe, efficient, and environmentally sustainable manner.
- Support the G-20 Global Marine Environment Protection initiative to develop a Best Practices Sharing Mechanism (GMPEP Mechanism), available to all interested countries and stakeholders, for the exchange of best practices for offshore **oil** and **gas** exploration and development in an effort to help prevent future accidents.
- Welcome and agree to review the **International Energy Agency's** work on potential best practices for natural **gas** development as an input into our effort to share information on strategies for its environmentally safe and sustainable production.
- Recognize the important work of the **International Atomic Energy Agency (IAEA)**, particularly full implementation of its Action Plan on Nuclear Safety, and strengthened cooperation between governments, the **nuclear energy** industry, and the IAEA. Encourage all Parties to make full use of the upcoming extraordinary meeting of the Convention on Nuclear Safety to enhance and strengthen the effectiveness of the international legal framework by the most efficient and practicable means available. Notes the importance of the upcoming December 2012 Fukushima Ministerial Conference on Nuclear Safety.

Respond to Changing Fuel Mix and Infrastructure

- Request the **IEA**, in coordination with other international institutions, to review existing work and provide a consolidated report on likely future scenarios for the global **energy** balance and the infrastructure requirements created by the changing **energy mix**.

- Welcome innovative, market-based instruments for financing **energy** infrastructure, including from the Multilateral Development Banks and Development Finance Institutions, such as guarantees, political risk insurance, and other forms of support for the private investment needed to modernize the global **energy** infrastructure with particular attention to environmental challenges.
- Facilitate free trade in all kinds of **energy resources** as a means to enhance economic security and decrease price volatility, including by abolishing barriers to trade and by providing for a favorable investment climate in the **energy** sector.
- Encourage both consumer and producer countries to further enhance the transparency of **gas** markets through dialogues and development of **gas** data systems, and request the **International Energy Forum** to accelerate the establishment of a full-fledged **Joint Oil Data Initiative-Gas**.
- Support for the development of open, transparent, consensus-based standards development processes, thereby facilitating interoperability, creating an international market for **grid** technologies, encouraging trade, and improving efficiency.

Promote the Sustainable Deployment of Renewables

- Support cooperation to enhance the regulatory and operating systems governing electric **grids** through initiatives under the Clean **Energy** Ministerial, including the launch of the Public-Private Leadership Forum under the 21st Century Power Partnership.
- Commission the **IEA**, in cooperation with **International Renewable Energy Agency** and other international institutions, to synthesize recent analyses of **renewable energy** development and deployment policies in G-8 countries, including:
 - Experience with, and innovation in, government funding for research and development (drawn from the report on “Accelerating **Energy Technology** Innovation”);
 - Efficacy of policies, including regulations, portfolio standards, feed-in tariffs, and other subsidies, to promote **renewable energy** deployment consistent with market competition among technologies.
- Request the **IEA** to synthesize recent assessments of existing regulatory models and **grid** management systems to identify best practices in integrating **renewable energy sources** into the **power grid**, drawing from a broad range of recent **IEA** work on **renewables** deployment and **smart grid** solutions. These developments should be aimed at sustainable and long-term modernization of the **electricity** sector, technological advancements, and economic growth that will allow all **renewables** to develop freely in a competitive environment.
- Applaud the **Global Bioenergy Partnership** (GBEP) for finalizing a set of sustainability indicators for the production and use of modern **bioenergy** and for

initiating capacity building activities through a Regional Forum in West Africa. Invite GBEP to continue implementing capacity building activities that promote modern **bioenergy** for sustainable development.

Enhance Preparedness for Oil and Gas Supply Disruptions

- Request the **IEA**, in coordination with other international institutions, to analyze how changes in the global **energy market** are affecting the preparedness for **oil** and **gas** disruptions. The review should include:
- The appropriate level and composition of strategic stocks, for example, crude **oil** versus petroleum products, to mitigate the economic consequences of **energy** supply disruptions; and
- Coordination of collective responses to supply disruptions with other producing and consuming countries, including the potential for increased stockholding by, and alignment of policies with, emerging consumer countries.

Advance Energy Efficiency, Including Appliance and Equipment Efficiency

- Accelerate the global pace of progress on appliances and equipment efficiency by encouraging all governments to:
- Build on current efforts under the Clean **Energy** Ministerial, including the Super-efficient Equipment and Appliances Deployment (SEAD) initiative;
- Take steps, including through SEAD, to recognize comparable and transparent test procedures for **energy efficiency** in appliances and other consumer products to allow manufacturers to test products once and sell them globally. This effort will draw on the work of existing standardization bodies to lower non-tariff barriers and improve the international comparability of **energy efficiency** policies.
- Agree to work together, including through the Clean **Energy** Ministerial's **Global Superior Energy Performance Partnership (GSEP)**, to encourage the use of **energy** management systems in industry as well as in government and other buildings and share related best practices.

Address Climate Change, Including By Reducing Short-Lived Climate Pollutants

- In the spirit of increasing mitigation efforts, we agree to collectively join the Climate and Clean Air Coalition to Reduce Short-Lived Climate Pollutants, launched on February 16, 2012. This new initiative will enhance our collective ambition in addressing climate change by complementing efforts to address CO₂ emissions. By developing strategies to reduce short term pollutants – chiefly methane, black **carbon**, and **hydrofluorocarbons** – we can help reduce global warming, improve health, and increase agricultural productivity, as well as **energy** security.
- Commission the World Bank to prepare a report on ways to integrate reduction of near-term climate pollution into their activities and ask the World Bank to bring

together experts from interested countries to evaluate new approaches to financing projects to reduce methane, including through pay-for-performance mechanisms.

In its role as 2012 Chair of the G8, the United States intends to work with G8 partners to develop mechanisms for following up these actions over the course of 2012.

2013 Lough Erne, Northern Ireland, United Kingdom

G8 Lough Erne Leaders Communiqué

13. We are therefore committed to taking steps to unlock further the potential of trade and investment to boost growth, jobs and sustainable development. We will also keep our word to refrain from and roll back protectionist measures and support a further extension of the G20 standstill commitment. We call on others to do the same. We commit our support to efforts to liberalise trade in green goods and services, emphasising that progress in this area will boost **green growth**. In this regard we commend Asia-Pacific Economic Cooperation's (APEC) decision in September 2012 to reduce tariffs on environmental goods as an important contribution to this end.

20. More effective border crossings and increased trade need investment in infrastructure, including transport, **energy** and telecommunications. In particular, better project preparation and risk mitigation efforts are required to boost private investment. The G8 commits to provide increased support for project preparation facilities for African regional infrastructure programmes and recognises the importance of the New Partnership for Africa's Development (NEPAD) Infrastructure Project Preparation Facility hosted by the African Development Bank and other similar mechanisms.

Extractives

34. Natural **resources** have the potential, if developed and managed responsibly, in line with internationally recognised environmental and social standards, to be a key driver of strong and sustainable growth, especially in developing countries with an abundance of natural **resources**. To illustrate, **oil** exports in 2010 from a single African country exceeded total net aid to sub-Saharan Africa. These **resources** offer a long term route out of poverty for many developing countries and an opportunity to reduce dependence on external assistance.

92. Iran's **nuclear** programme, which it continues to develop in violation of UN Security Council Resolutions and in defiance of the **International Atomic Energy Agency (IAEA)** Board of Governors resolutions, remains a source of serious concern. We once again urge Iran to comply fully and without delay with these international obligations. We call on the international community to ensure full implementation of UN sanctions. We stress that it is essential and urgent for Iran to cooperate fully with the IAEA on all aspects of its **nuclear** programme, including to resolve questions on its possible military dimensions, and to engage actively and constructively with the E3+3 (China, France, Germany, Russia, the UK, the US and the EU High Representative) to find the diplomatic resolution to the nuclear issue which we seek. We reaffirm that in line with the UN Security Council's approved dual track approach, Iran has the ability to avoid further isolation and improve its situation only if it promptly addresses the concerns of the

international community. We strongly urge Iran to fully respect its human rights obligations. We note the election of President-elect Rouhani and we invite Iran to use this opportunity to resolve its differences with the international community.

Nuclear Safety

95. Two years after the accident at the TEPCO's Fukushima Daiichi **nuclear power** station, achieving and maintaining the highest levels of **nuclear** safety worldwide remains a priority. We reaffirm the importance of international cooperation and our full support to the **IAEA Action Plan on Nuclear Safety**. We will continue, in our national capacity as well as collectively, to take our full share in its implementation. In this regard, we commend and support the work being done at the IAEA for improving the effectiveness of the **Convention on Nuclear Safety** and stress the need to further strengthen the implementation of other relevant conventions as well as national capabilities and international mechanisms for **nuclear** emergency preparedness and response.

2014 Brussels, Belgium

G7 Brussels Summit Declaration

Energy

6. The use of **energy** supplies as a means of political coercion or as a threat to security is unacceptable. The crisis in Ukraine makes plain that **energy** security must be at the centre of our collective agenda and requires a step change to our approach to diversifying **energy** supplies and modernising our **energy** infrastructure. Under the **Rome G7 Energy Initiative**, we will identify and implement concrete domestic policies by each of our governments separately and together, to build a more competitive, diversified, resilient and **low-carbon energy system**. This work will be based on the core principles agreed by our **Ministers of Energy** on May 5-6 2014, in Rome:

- Development of flexible, transparent and competitive **energy markets**, including **gas markets**.
- Diversification of **energy fuels, sources** and routes, and encouragement of indigenous sources of **energy** supply.
- Reducing our greenhouse gas emissions, and accelerating the transition to a low **carbon** economy as a key contribution to sustainable **energy** security.
- Enhancing **energy efficiency** in demand and supply, and demand response management.
- Promoting deployment of clean and sustainable **energy** technologies and continued investment in research and innovation.
- Improving **energy** systems resilience by promoting infrastructure modernization and supply and demand policies that help withstand systemic shocks.

- Putting in place emergency response systems, including reserves and **fuel** substitution for importing countries, in case of major **energy** disruptions.

7. Based on these principles we will take the following immediate actions:

- We will complement the efforts of the European Commission to develop emergency **energy** plans for winter 2014-2015 at a regional level.
- Working with international organisations such as the **International Energy Agency (IEA)**, the **International Renewable Energy Agency**, and the international financial institutions, we will supply technical assistance, including leveraging the private sector, and facilitate exchanges with Ukraine and other European countries seeking to develop indigenous **hydrocarbon resources** and **renewable energies**, as well as to improve **energy efficiency**.
- We will conduct assessments of our **energy security** resilience and enhance our joint efforts, including on critical infrastructure, transit routes, supply chains and transport.
- We will ask the **IEA**, in close cooperation with the European Commission, to present by the end of 2014 options for individual and collective actions of the G7 in the field of **gas** security.

8. We will also:

- Promote the use of low **carbon** technologies (**renewable energies, nuclear** in the countries which opt to use it, and **carbon capture and storage**) including those which work as a base load **energy** source; and
- Promote a more integrated **Liquefied Natural Gas (LNG) market**, including through new supplies, the development of transport infrastructures, storage capabilities, and LNG terminals, and further promotion of flexible **gas** markets, including relaxation of destination clauses and producer-consumer dialogue.

9. We ask our **Energy Ministers** to take forward this **Rome G7 Energy Initiative** and report back to us in 2015.

Climate Change

11. We reaffirm our support for the Copenhagen Accord commitments to mobilise USD 100 billion per year by 2020 from a wide variety of sources, both public and private, to address the climate mitigation and adaptation needs of developing countries in the context of their meaningful and transparent mitigation actions. We welcome the adoption of the d's operating rules and the decision to commence its initial resource mobilisation in the coming months. We remain committed to the elimination of inefficient **fossil fuel** subsidies and continued discussions in the OECD on how export credits can contribute to our common goal to address climate change. We will strengthen efforts to improve measurement, reporting, verification and accounting of emissions and improve the reporting of international climate finance flows, consistent with agreed decisions of the

United Nations Framework Convention on Climate Change. We will work together and with others to phase down the production and consumption of **hydrofluorocarbons (HFC)** under the Montreal Protocol. We will also continue to take action to promote the rapid deployment of climate-friendly and safe alternatives in motor vehicle air-conditioning and we will promote public procurement of climate-friendly HFC alternatives.

14. We will continue to promote inclusive and resilient growth in Africa, working with governments and citizens in Africa to enhance governance and transparency, improve infrastructure, notably in the **energy** sector, eliminate trade barriers, facilitate trade and investment, and strengthen the responsible and sustainable management of natural resources and the revenues they generate. We welcome the active role of the African Union and the New Partnership for Africa's Development in the process of reforming the Africa Partnership Forum.

Ukraine

26. The G7 are committed to continuing to work with Ukraine to support its economic development, sovereignty and territorial integrity. We encourage the fulfilment of Ukraine's commitment to pursue the difficult reforms that will be crucial to support economic stability and unlock private sector-led growth. We welcome the decision of the International Monetary Fund (IMF) to approve a \$17 billion programme for Ukraine, which will anchor other bilateral and multilateral assistance and loans, including around \$18 billion foreseen to date from G7 partners. We welcome the swift disbursement of macro-economic support for Ukraine. We support an international donor coordination mechanism to ensure effective delivery of economic assistance and we welcome the EU's intention to hold a high-level coordination meeting in Brussels. We welcome ongoing efforts to diversify Ukraine's sources of **gas**, including through recent steps in the EU towards enabling reverse **gas** flow capacities and look forward to the successful conclusion of the talks, facilitated by the European Commission, on **gas** transit and supply from the Russian Federation to Ukraine.

Iran

35. We reaffirm our strong commitment to a diplomatic resolution of the Iranian **nuclear** issue and welcome the efforts by the E3+3, led by High Representative Ashton, and Iran to negotiate a comprehensive solution that provides confidence in the exclusively peaceful nature of Iran's **nuclear** programme. We underline the importance of the continuing effective implementation by the E3+3 and Iran of the Joint Plan of Action. We call on Iran to cooperate fully with the **International Atomic Energy Agency** on verification of Iran's **nuclear** activities and to resolve all outstanding issues, including, critically, those relating to possible military dimensions. We strongly urge Iran to fully respect its human rights obligations. We call on Iran to play a more constructive role in supporting regional security, in particular in Syria, and to reject all acts of terrorism and terrorist groups.

2015 Elmau, Germany

Declaration

Global Economy

State of the Global Economy

The global economic recovery has progressed since we last met. In some major advanced economies growth is strengthening and prospects have improved. The decline of **energy prices** has supportive effects in most of the G7 economies. However, many of our economies are still operating below their full potential and more work is needed to achieve our aim of strong, sustainable and balanced growth. Overall G7 unemployment is still too high, although it has decreased substantially in recent years. We also continue to see challenges such as prolonged low inflation rates, weak investment and demand, high public and private debt, sustained internal and external imbalances, geopolitical tensions as well as financial market volatility.

Preventing and Combating Proliferation

We remain committed to the universalisation of all relevant treaties and conventions that contribute to preventing and combating the proliferation of weapons of mass destruction, in particular the Nuclear Non-Proliferation Treaty (NPT), the Chemical Weapons Convention and the Biological and Toxin Weapons Convention. We strongly regret that, although agreement was reached on a number of substantive issues, it was not possible to reach consensus on a final document at the Ninth NPT Review Conference. The G7 renew their commitment to the full implementation of the 2010 Action Plan across the three pillars of the Treaty. The NPT remains the cornerstone of the nuclear non-proliferation regime and the essential foundation for the pursuit of nuclear disarmament and non-proliferation, as well as for the peaceful use of **nuclear energy**.

Iran

We welcome the political understanding on key parameters of a Joint Comprehensive Plan of Action reached by the E3+3, facilitated by the EU, and Iran on 2 April. We support the continuous efforts by the E3/EU+3 and Iran to achieve a comprehensive solution by 30 June that ensures the exclusively peaceful nature of Iran's nuclear programme and ensures that Iran does not acquire a nuclear weapon. We call on Iran to cooperate fully with the **International Atomic Energy Agency** on verification of Iran's nuclear activities and to address all outstanding issues, including those relating to possible military dimensions. We urge Iran to respect the human rights of its citizens and to contribute constructively to regional stability.

Climate Change, Energy, and Environment

Climate Change

The agreement should enhance transparency and accountability including through binding rules at its core to track progress towards achieving targets, which should promote increased ambition over time. This should enable all countries to follow a low-**carbon** and resilient development pathway in line with the global goal to hold the increase in global average temperature below 2 °C.

Mindful of this goal and considering the latest IPCC results, we emphasize that deep cuts in global greenhouse gas emissions are required with a **decarbonisation** of the global economy over the course of this century. Accordingly, as a common vision for a global goal of greenhouse gas emissions reductions we support sharing with all parties to the UNFCCC the upper end of the latest IPCC recommendation of 40 to 70 % reductions by 2050 compared to 2010 recognizing that this challenge can only be met by a global response. We commit to doing our part to achieve a low-**carbon** global economy in the long-term including developing and deploying innovative technologies striving for a transformation of the energy sectors by 2050 and invite all countries to join us in this endeavor. To this end we also commit to develop long term national low-carbon strategies.

Climate finance is already flowing at higher levels. We will continue our efforts to provide and mobilize increased finance, from public and private sources, and to demonstrate that we and others are well on our way to meet the USD 100 bn goal and that we stand ready to engage proactively in the negotiations of the finance provisions of the Paris outcome. We recognize the potential of multilateral development banks (MDBs) in delivering climate finance and helping countries transition to low **carbon** economies. We call on MDBs to use to the fullest extent possible their balance sheets and their capacity to mobilize other partners in support of country-led programs to meet this goal. We thank the presidency for the publication of the Background Report on Long-Term Climate Finance and call for a further exchange in all relevant fora in view of COP 21.

Mobilization of private sector capital is also crucial for achieving this commitment and unlocking the required investments in low-**carbon** technologies as well as in building resilience against the effects of climate change. To overcome existing investment barriers finance models with high mobilization effects are needed.

To this end, we will:

b. Accelerate access to **renewable energy** in Africa and developing countries in other regions with a view to reducing energy poverty and mobilizing substantial financial resources from private investors, development finance institutions and multilateral development banks by 2020 building on existing work and initiatives, including by the Global Innovation Lab for Climate Finance as set out in the annex.

We remain committed to the elimination of inefficient **fossil fuel** subsidies and encourage all countries to follow and we remain committed to continued progress in the OECD discussions on how export credits can contribute to our common goal to address climate change.

In order to incentivize investments towards low-**carbon** growth opportunities we commit to the long-term objective of applying effective policies and actions throughout the global economy, including carbon market-based and regulatory instruments and call on other countries to join us. We are committed to establishing a platform for a strategic dialogue on these issues based on voluntary participation and in cooperation with relevant partners, including the World Bank.

Energy

We reaffirm our commitment to the **energy security** principles and specific actions decided in Brussels in 2014, welcome the progress achieved since then under the **Rome G7 Energy Initiative** and will continue their implementation. Moreover, we welcome the **G7 Hamburg Initiative for Sustainable Energy Security**, in particular the additional concrete joint actions to further strengthen sustainable energy security in the G7 countries and beyond.

Notably, we reaffirm our support for Ukraine and other vulnerable countries in their ongoing efforts to reform and liberalize their **energy systems** and reiterate that **energy** should not be used as a means of political coercion or as a threat to security. We welcome the intention of the Ukrainian government to reduce **energy-related subsidies** and invest in **energy efficiency programmes**.

In addition, we intend to continue our work on assessments of **energy system** vulnerabilities. Moreover, we will work on strengthening the resilience and flexibility of **gas** markets, covering both **pipeline gas** and **liquefied natural gas**. We regard diversification as a core element of **energy security** and aim to further diversify the **energy mix, energy fuels, sources and routes**. We will strengthen cooperation in the field of **energy efficiency** and launch a new cooperative effort on enhancing cybersecurity of the **energy sector**. And we will work together and with other interested countries to raise the overall coordination and transparency of **clean energy** research, development and demonstration, highlighting the importance of **renewable energy** and other low-carbon technologies. We ask our **Energy Ministers** to take forward these initiatives and report back to us in 2016.

Annex to the Leaders' Declaration

Initiative for Renewable Energy in Africa

Africa is endowed with vast **renewable energy** resources. However, half of the world's un-electrified households are in sub-Saharan Africa. Despite significant recent improvements in increasing **energy access**, the **IEA** estimates that 645 million people in sub-Saharan Africa will be without **access to energy** in 2030. Improving access to affordable **energy** services and thereby reducing **energy** poverty is an important objective in which a **clean energy** agenda can play an important role. In this respect, developing regional **renewable energy** resources effectively utilizing all available resources could serve as the main driver to increase African **energy** generation and unlock potential for the future.

Objective

The aim of this effort is to improve sustainable **energy** access in Africa by 2030 by accelerating the deployment of **renewable energy** (solar, onshore and offshore wind power, hydro, biomass and geothermal, off-grid renewables, and grid and corridors deployment). This initiative is intended to scale up existing initiatives and aims to reach up to 10,000 MW in additional installed renewables capacity by 2020. It would identify and support the bankability of renewable **energy** projects in Africa, based on national and regional investment plans. It is possible to build on existing multilateral and bilateral

programmes – most notably the UN “**Sustainable Energy for All SE4All**”, IRENA “**Africa clean energy corridor**” and UNEP initiatives,

Africa-EU Energy Partnership, African Union, NEPAD, AMCEN and AfDB flagship programmes including the African Power Vision, the U.S. “Power Africa” initiative and the EU’s Electrification Financing Initiative (ElectriFi). This initiative aims to strengthen coordination between existing efforts and to highlight gaps where future work is needed. It should constitute an integral component of the international efforts to ensure universal access to affordable, reliable and safe and clean **energy** for all. The G7 aims to use existing financial institutions, i.e. MDBs/DFIs and the Green Climate Fund, and target specific challenges to private investments in climate technologies, i.e. financial and political risks, limited local project development capacity, and weak regulatory framework and sector policies.

The initiative will also include innovative instruments as well as scaling up existing successful programs, including but not limited to the “Global Innovation Lab for Climate Finance” (the Lab) which supports the identification and piloting of innovative climate finance instruments aiming to drive private investments into **renewable energy** and **energy efficiency** in developing countries.

Method

Backed by the political commitment of the G7 in Elmau to coordinate efforts to accelerate the development of clean **energy** in Africa, the African Union, French COP 21 presidency and German G7 presidency in consultation with other G7 members will develop a common plan for further action. The action plan will be worked out in close cooperation with UNEP and the World Bank engaging other relevant stakeholders and presented at the ministerial meeting on climate finance that will take place in Lima during the IMF/World Bank 2015 Annual Meetings as a decisive milestone on the road to COP21 in Paris.

2016 Ise-Shima, Japan

Declaration

G7 Ise-Shima Economic Initiative

We reiterate our commitments to using all policy tools – monetary, fiscal and structural – individually and collectively, to strengthen global demand and address supply constraints, while continuing our efforts to put debt on a sustainable path. We reaffirm the important role of mutually-reinforcing fiscal, monetary and structural policies, the three pronged approach, to buttress our efforts to achieve strong, sustainable, and balanced growth. We concur on the importance of strengthening our efforts in a cooperative manner to implement our fiscal strategies flexibly to strengthen growth, job creation and confidence, while enhancing resilience and ensuring debt as a share of GDP on a sustainable path, as well as to advance structural reform decisively. We are committed to advancing structural reforms to boost growth, productivity and potential output and to leading by example in addressing structural challenges. We commit to further investment in areas conducive to economic growth, such as environment, **energy**, digital economy, human resource development, education, science and technology.

- **Energy**: Recognizing the important role that the **energy** system has to play in the implementation of the Paris Agreement, we are determined to accelerate our work towards the transition to an **energy** system that enables a **decarbonization** of the global economy, and commit to further invest in supporting innovation in **energy** technologies and encouraging clean **energy** and **energy** efficiency, so as to ensure economic growth with reduced GHG emissions. Faced with the increased uncertainty posed by the current energy price levels, we also commit to play a leading role in facilitating **energy** investments, in particular investments in quality **energy** infrastructure and upstream development.

Global Economy

Policy Response

We are also making tax policy and public spending as growth-friendly as possible, including by prioritizing expenditure in favor of high-quality investment. We will consider the composition of our budget expenditures and revenues to support productivity, employment, inclusiveness and growth. We commit to ensuring that our fiscal and structural policies support sustainable social security services, which contribute to addressing our common demographic challenges. We intend to ensure an appropriate level of public investment as well as promote quality infrastructure investment to address shortfalls, including through effective resource mobilization in partnership with the private sector. We commit to further investment in areas conducive to economic growth, such as environment, **energy**, digital economy, human resource development, education, science and technology.

Libya

We welcome the decree of the Presidential Council authorizing the ministers of the Government of National Accord (GNA) to assume duties and take control over their ministries, pending the taking of the official oath. We will work closely with the GNA as the sole legitimate government of Libya and call on all Libyan parties to recognize its authority and implement the Libyan Political Agreement. We stand ready to offer support to the GNA to help restore peace, security and prosperity, and address the dire humanitarian suffering. We express our full support to United Nations Special Representative of the Secretary General Kobler's continued efforts to facilitate the full implementation of the Libyan Political Agreement. We remain deeply concerned about the growing terrorist threat, trafficking in persons and smuggling of migrants and arms in Libya. We urge all Libyan parties and security forces to work quickly to implement a unified command in coordination with the GNA and in accordance with the Libyan Political Agreement to fight ISIL/Da'esh. We support the sole and effective oversight of the GNA over the Libyan financial institutions and the **Libyan National Oil Corporation**, ensuring that they function for the benefit of all Libyans. We express concern about activities which could damage the integrity and unity of such institutions, and condemn all attempts to illicitly export **crude oil** from Libya. We reaffirm our commitment to upholding the arms embargo, in accordance with applicable UN Security Council resolutions while fully supporting the GNA's intention to submit appropriate arms embargo exemption requests to the UN Libya Sanctions Committee to procure necessary lethal arms and materiel to counter UN-designated terrorist groups and to combat ISIL/Da'esh throughout the country.

Climate Change, Energy, Environment

Climate Change

We welcome the progress to date and are ready to further promote the relevant initiatives on climate risk insurance, early warning systems and **renewable energy** in Africa, such as InsuResilience, CREWS and the **Africa Renewable Energy Initiative**. We further welcome the involvement of the private sector, subnational entities, and others through the Lima-Paris Action Agenda. We recognize that innovation is critical for an effective, long-term global response to our shared climate challenge, and intend to play a leading role in Mission Innovation. We also welcome the leadership of the private sector community in this regard. We recognize the important role of providing incentives for emission reduction activities, including tools such as domestic policies and carbon pricing. We welcome the establishment of the Carbon Market Platform and its first strategic dialogue to be held in Tokyo.

Recognizing the urgent need for effective efforts in the field of international aviation, we express our strong commitment to work together for the adoption of a Global Market-Based Measure (GMBM) in order to enable **carbon** neutral growth from 2020, through engaging constructive dialogue, by reaching a decision at the 39th session of the International Civil Aviation Organization (ICAO) Assembly. We encourage all world leaders to join us in supporting a decision later this year.

Given the fact that energy production and use account for around two-thirds of global GHG emissions, we recognize the crucial role that the **energy** sector has to play in combatting climate change. We remain committed to the elimination of inefficient **fossil fuel** subsidies and encourage all countries to do so by 2025.

Energy

Energy plays a crucial role in sustaining global economic growth. With this in mind, we commit to play a leading role in facilitating energy investments, and encourage relevant stakeholders, despite the increased uncertainty posed by the current **energy** price levels, to sustain their investments in **energy** sector, in particular in quality **energy** infrastructure and in upstream development, so that we can mitigate risks to future growth of global economy. We recognize the important role that the **energy** system has to play in the implementation of the Paris Agreement. In this regard, we are determined to accelerate our work towards the transition to an **energy** system that enables a **decarbonization** of the global economy. We reiterate our strong support for Mission Innovation and commit to further investments in supporting innovation in **energy** technologies and encouraging clean and **energy** efficient products, facilities and buildings, so as to ensure economic growth with reduced GHG emissions. We support the enhanced efforts on **energy** efficiency and use of **renewable energy**, including hydro, as well as other domestic resources.

We reaffirm our commitment to continuing the implementations of the **energy** security principles and actions decided in Brussels in 2014 and Schloss Elmau in 2015, and endorse the **Kitakyushu Initiative on Energy Security for Global Growth**, as well as welcome the progresses achieved in collaboration with partners including the **International Energy Agency (IEA)**. We welcome the concrete actions to strengthen

energy security for natural **gas**, both pipeline and liquefied natural **gas** (LNG), including Japan's Strategy for LNG Market Development, the EU Strategy for **LNG** and **gas** storage and the **gas** security plan by the **IEA**. We reaffirm our commitment to continuous efforts in enhancing well-functioning natural **gas** markets with greater transparency and flexibility, including relaxation of destination clauses, development of price indices and building sufficient and resilient infrastructure with open access, as well as furthering a strategic view of the **LNG** supply chain at a global level. We also commit to our continuous work on enhancing cybersecurity in **energy** sector and strengthening our cooperation in the field of **electricity security**.

In the context of the ongoing crisis between the Russian Federation and Ukraine, we reiterate that **energy** should not be used as a means of political coercion or as a threat to security. We welcome the substantial **energy** policy reforms ongoing in Ukraine, and strongly urge it to pursue further ambitious reform of its **energy** sector. We also call for enhanced cooperation between the Ukrainian national **gas** transmission system operator and relevant international peers.

We welcome the steady progress on decommissioning and treatment of contaminated water at Fukushima Daiichi Nuclear Power Station, and Japan's efforts to proceed in an open and transparent manner in close communication with the international community, towards developing accurate global understanding of the situation in Fukushima. In those countries that opt to use **nuclear energy**, it substantially contributes to the reduction of future GHG emissions and works as a base load **energy** source. In those countries it is also crucially important to engage the public in science-based dialogue and transparency to inform policymaking. We call upon all countries that opt to use nuclear power to ensure the highest standards of safety, security and non-proliferation including an independent and effective regulator, and to exchange their expertise and experiences. We welcome the mutual cooperation and information exchange through international organizations such as the **International Atomic Energy Agency (IAEA)**, the Nuclear Energy Agency, and the World Association of Nuclear Operators.

Development

The 2030 Agenda for Sustainable Development

We are determined to take ambitious domestic action in order to contribute substantially to the global transition to sustainable economies. In addition to our domestic actions, we commit to support developing countries' efforts to implement the 2030 Agenda, with a particular emphasis on the dignity of individuals in vulnerable groups and promoting human security. Important elements in our collective response include: the empowerment of all women and girls and gender equality, global health, quality infrastructure investment, support for youth in the Least Developed Countries (LDCs) in particular, revitalized response to threats to peace and security, tackling forced displacement and modern slavery, industrial human resource development and inclusive innovation; food security and nutrition, the CONNEX initiative; support for disaster risk reduction including through World Tsunami Awareness Day, support for climate change mitigation and adaptation, **energy security** and **sustainable energy**, resource efficiency and 3Rs including addressing marine litter, sustainable forest management and eliminating illegal logging. We also welcome the World Humanitarian Summit.

Principles for Promoting Quality Infrastructure Investment

Principle 4: Ensuring alignment with economic and development strategies including aspect of climate change and environment at the national and regional levels

Quality infrastructure investment should be aligned with economic and development strategies at the national and regional levels, through dialogues with stakeholders from the project preparation and prioritization phases. Relevant elements of economic and development strategies to be considered include the development of a global supply chain through enhanced connectivity; use of latest technology such as information and communication technology; promotion of private investment and attraction of new industries; medium and long-term plans based on a long-term and cross-sector demand forecast and other relevant information; and debt sustainability and fiscal outlook. Climate change resilience, **energy security** and sustainability, conservation of biodiversity, disaster risk reduction should be considered including through further promotion of ecosystem-based approaches and green infrastructure.

2017 Taormina, Italy*Communiqué*

Africa

Africa's security, stability and sustainable development are high priorities for us. Our goal is indeed to strengthen cooperation and dialogue with African countries and regional organizations to develop African capacity in order to better prevent, respond to and manage crises and conflicts, as regards the relevant goals of the 2030 Agenda for Sustainable Development. A stable Africa means a stable environment for investment. In this regard, we note the forthcoming launch by the EU of the External Investment Plan (EIP) as an important tool to boost investment in the continent, as well as the envisaged G20 Partnership Initiative with Africa and the investment pledge made at the Tokyo International Conference for African Development (TICADVI). It is also important to continue our efforts to expand reliable access to **energy** in Africa. Unlocking Africa's potential requires empowering millions of people through innovation, education, promoting gender equality and human capital development. Decent employment, better health services, and food security will also contribute to building a more resilient society in a rapidly changing world. We aim to work in partnership with the African continent, supporting the African Union Agenda 2063, in order to provide the young generation in particular with adequate skills, quality infrastructures, financial resources, and access to a sustainable, prosperous and safe future. Such advances also promise to help reduce migratory pressure, relieve humanitarian emergencies and create socio-economic opportunities for all.

Climate and Energy

31. We commit to strengthening our collective energy security and to ensuring open, transparent, liquid and secure global markets for **energy** resources and technologies. We reaffirm that all countries that opt to use nuclear power must ensure the highest standards of nuclear safety, security and non-proliferation. We are determined to harness the significant economic opportunities, in terms of growth and job creation, offered by the transformation of the **energy** sector and clean technology.

People-Centred Action Plan on Innovation, Skills and Labor

Pillar II – Knowledge-Based Capital and Enabling Infrastructure

Key Policy Priority 7. Foster dialogue among G7 countries on policies that could contribute to the deployment and the interconnection of NPR-enabling quality infrastructures, such as high-speed broadband networks; **smart energy** grids; smart logistics and mobility platforms. Encourage policies that will enable people, businesses and researchers to access such infrastructure, providing them thus with access to new innovations that can create opportunities in all fields.