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ITALIAN POLICIES AND MEASURES TO RESPOND TO CLIMATE CHANGE

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I. THE LEGAL FRAMEWORK TO RESPOND TO CLIMATE CHANGE

The UN Framework Convention on Climate Change

The UN Framework Convention on Climate Change is the pillar of all global efforts played by the international community to combat climate change [1]. Its ultimate objective is the "stabilisation of greenhouse gases concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system. Such a level should be achieved within a time-frame sufficient to allow ecosystems to adapt naturally to climate change, to ensure that food production is not threatened and to enable economic development to proceed in a sustainable manner" [2].

As one can see, the Convention emphasises the climate change mitigation as its primary objective, while recognising at the same time that climate change at a certain degree is already occurring and therefore some efforts should be put also in trying to identify the best options for adaptation, taking into account the "common but differentiated responsibilities" of the Parties to the Convention as well as their "respective capabilities".

The Framework Convention sets out some guiding principles, to guide the Parties in achieving

[1] The climate change problem originates from the accumulation of greenhouse gases in the atmosphere, mainly induced by anthropogenic emissions, which results in a progressive global warming of the planet. Climate change started being investigated at international level in the late 70's and 80's, mainly thanks to the initiatives of the World Meteorological Organisation (WMO) and the United Nations Environment Programme (UNEP). In 1988, WMO and UNEP jointly established the Intergovernmental Panel on Climate Change (IPCC) with a mandate to assess: the state of existing knowledge about the climate system and climate change; the environmental, economic and social impacts of climate change; the possible response strategies.
The IPCC issued its First Assessment Report on Climate Change in 1990, which predicted that on "business-as-usual" emissions scenario, global mean temperature could rise by an average rate of about 0.3 degrees Celsius by decade during the next century. In 1995, the IPCC published its Second Assessment Report, which examined new scientific evidence on climate change, but substantially did not change the major conclusions of the First Report. The release of the IPCC Third Assessment Report is expected for the year 2000.

[2] The UN Framework Convention on Climate Change (UNFCCC) was opened to signature in June 1992 at the Rio UN Conference on Environment and Development (UNCED. It was immediately signed by 154 States (plus the EC). The UNFCCC entered into force two years later, on 21 March 1994. Today, the UNFCCC has 180 Parties, which makes it one of the international conventions with the greatest membership around the world.

its objective and implementing its provisions. In article 3 of the Convention, reference can be found to several emerging principles of international environmental law and the UNFCCC can be certainly said to have given in these years a great contribution to the process of recognition of some of these principles as general principles of international law. Among the most celebrated principles which can be found at article 3 of the Convention are:

- *the principle 2 of the Rio Declaration on Environment and Development*, namely the principle that States have the sovereign right to exploit their own resources pursuant to their own environmental policies, and the responsibility to ensure that activities within their jurisdiction or control do not cause damage to the environment of other states or of areas beyond the limits of national jurisdiction;
- *the principle of intergenerational equity*, according to which the Parties to the Convention should protect the climate system for the benefit of the present and future generations of humankind;
- *the principle of common but differentiated responsibilities*, namely the principle that States in view of their different contributions to global environmental degradation should give a differentiated response to the common global threats on the basis of their respective capabilities;
- *the precautionary principle*, on the basis of which the Parties should take precautionary measures to anticipate, prevent or minimise the causes of climate change and mitigate its adverse effects and where there are threats of serious and irreversible damage, lack of full scientific certainty should not be used as a reason for postponing such measures, taking into account that policies and measures to deal with climate change should be cost-effective so as to ensure global benefits at the lowest possible cost;
- *the principle of sustainable development*, on the basis of which policies and measures to protect the climate system against human-induced change should be appropriate for the specific conditions of each Party and should be integrated with national development programmes;
- *the compatibility clause with the world trading rules*, according to which the Parties should cooperate to promote a supportive and open international economic system that would lead to sustainable economic growth and development in all Parties, particularly developing country Parties, thus enabling them better to address the problems of climate change. In this view, measures taken to combat climate change, including unilateral ones, should not constitute a means of arbitrary or unjustifiable discrimination or a disguised restriction on international trade.

All Parties to the UNFCCC have a number of general commitments. They have *inter alia* the duty (1) to develop and submit national communications containing inventories of greenhouse gas emissions by source and greenhouse gas removals by sinks; (2) to adopt national programmes to combat climate change and to develop strategies for adapting to its impacts; (3) to promote technology transfer and sustainable management of sinks and reservoirs; (4) to take climate change into account in their relevant social, economic and environmental policies and actions; (5) to co-operate in scientific, technological and socio-economic matters.

In addition, Annex I countries have undertaken a voluntary (not legally binding) commitment to adopt policies and measures aimed at returning their greenhouse gases emissions to 1990 levels by the year 2000. However, in reality none of the Annex I Parties has made in these

recent years a serious effort to achieve this target which has been now virtually abandoned after the signature of the Kyoto Protocol.

The supreme body of the Framework Convention is the Conference of the Parties (COP), whose main role is to keep under regular review the implementation of the Convention. The COP will periodically review existing commitments of the Parties in the light of the Convention's objective, the experience gained in its implementation and the evolution of scientific and technological knowledge. The COP can also adopt new and additional commitments through amendments and protocols.

General remarks on the Kyoto Protocol

The Kyoto Protocol was adopted by delegates of all Parties at the conclusion of the Third Conference of the Parties to the UNFCCC (COP-3), in December 1997 [3]. The Kyoto Protocol (KP) represents the first concrete step to fulfil the main objective of the United Nations Framework Convention on Climate Change (UNFCCC) to reduce anthropogenic emissions of greenhouse gases to a level which would prevent dangerous interference with the climatic system [4].

The KP contains legally binding targets for limitation and reduction of greenhouse gases emissions by all Annex I countries (essentially all industrialised countries and economies in transition) [5], with the aim to reducing their overall emissions of such gases by at least 5% below 1990 levels in the commitment period 2008-2012, pursuant to article 3 KP. Annex B to the Protocol lists the quantified emission limitation and reduction targets of Annex I Parties. The different targets can be grouped in three categories, with reference to the type of commitment to be fulfilled in the commitment period 2008-2012 with respect to the GHG emission level of the year 1990:

(1) stabilisation target: Russia and Ukraine;
(2) reduction target: most of the Annex I countries, among which Japan (-6%), USA (-7%), EU and its Member States (-8%);
(3) limited increase of emissions target: Norway (+1%), Australia (+8%), Iceland (+10%).

As seen above, the EU and its member States are committed to an overall reduction of

[3] The texts of the UNFCCC and the KP are reproduced at the Internet site of the UNFCCC Secretariat (www.unfccc.de), together with many other relevant documents and information and the proceedings of all the Conferences of the Parties and the meetings of the subsidiaries bodies to the Convention.

[4] On the UNFCCC in general see P. Sands, *The United Nations Framework Convention on Climate Change*, Review of European Community and International Environmental Law (RECIEL), 1:1, 1992, p. 274; D. Bodansky, *The United Nations Framework Convention on Climate Change*, 18 Yale Journal of International Law 1993, p. 516. On the origins and main characteristics of the KP see F. Yamin, *The Kyoto Protocol: Origins, Assessment and Future Challenges*, in RECIEL, 7:2, 1998, p. 113.

[5] The countries listed in Annex I to the UNFCCC are: Australia, Austria, Belarus, Belgium, Bulgaria, Canada, Croatia, Czech Republic, Denmark, European Community, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Japan, Latvia, Liechtenstein, Lithuania, Luxembourg, Monaco, Netherlands, New Zealand, Norway, Poland, Portugal, Romania, Russian Federation, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey, Ukraine, United Kingdom of Great Britain and Northern Ireland, United States of America.

greenhouse gases of 8% below 1990 levels in the commitment period 2008-2012. However, article 4 of the KP allows the EU to conclude an agreement with its member States for the joint fulfilment of the overall -8% reduction commitment. In other words, the overall -8% reduction commitments allocated to the EU as a whole is to be reached through a re-allocation of the limitation and reduction targets among the member States in a way which takes into the account the different situations of the various countries. The final decision on the re-allocation within the EU member States of the Kyoto commitment, the so-called "burden-sharing", has been taken by the EU Environment Council in June 1998. Member States were allocated different targets, which can be grouped in three categories, with reference to the type of commitment to be reached in the first commitment period 2008-2012 with respect to the GHG emission level of the year 1990:

(1) stabilisation target: France and Finland;
(2) reduction target: Luxembourg (-28%), Germany and Denmark (-21%), Austria (-13%), United Kingdom (-12,5%), Belgium (-7,5%), Italy (-6,5%), the Netherlands (-6%);
(3) limited increase of emissions target: Sweden (+4%), Ireland (+13%), Spain (+15%), Greece (+25%), Portugal (+27).

The Kyoto Protocol in brief: the basic features

The basic features of the KP, can be summarised as follows.

- overall greenhouse gases emissions reduction for Annex I countries by at least 5% below 1990 levels in the commitment period 2008-2012;
- differentiated targets for the various Annex I countries to achieve the overall greenhouse gases emissions reduction;
- possibility for each Party to achieve its target in co-operation with other Parties, through the "joint fulfilment of obligations". This mechanism represents the legal basis of the "burden-sharing" agreement reached within the EU, in order to re-allocate among the member States the overall reduction commitment of -8%;
- enlargement of the "basket" of greenhouse gases covered by the emissions reduction commitments from three to six gases. Three new gases (HFCs, PCFs, SF_6) have been added by the KP to the three gases originally contained in the UNFCCC (CO_2, CH_4, N_2O);
- inclusion of "sinks" for the absorption of greenhouse gases;
- establishment of three mechanisms ("flexibility mechanisms" or "Kyoto mechanisms") to help parties to achieving their targets. The three mechanisms are "joint implementation", "clean development mechanisms" and "emission trading".

The Kyoto mechanisms

The Kyoto mechanisms (better known as "flexibility mechanisms" prior to COP-4, when Parties have agreed to term them officially "Kyoto mechanisms") are designed to help parties to achieve their targets at a lower costs by investing in projects for the reduction of emissions in other countries with Joint implementation (JI) and Clean Development Mechanism (CDM)

or by trading in emission reduction units with Emissions Trading (ET) [6].

The economic rational of Joint Implementation (JI), the Clean Development Mechanism (CDM) and Emissions Trading (ET) is to exploit the differentials in marginal costs of climate change mitigation between different countries [7]. Leaving aside for a moment the specificity of each mechanism, it is interesting to note here that the three Kyoto mechanisms are perfectly "interchangeable", in the sense that when the mechanisms will be fully "operative" countries which have obtained emission reduction units through JI and CDM projects will be able to trade them freely with other Parties through ET.

The major limit placed by the KP to the free use of the Kyoto mechanisms is the requirement that the reductions achieved by means of the mechanisms shall be "supplemental to domestic actions" for the purpose of meeting the reduction commitments under Article 3 KP. However, what "supplementarity" means in quantitative terms needs yet to be defined. Some countries, such as the USA, which advocate the greatest recourse to the Kyoto mechanisms to satisfy their reduction commitments, have planned to achieve up to 75% of their emission reductions through the mechanisms. Some other countries, among which the EU member States, have instead proposed to pose a "limit" (a so-called "ceiling") to the possibility to achieve the prescribed reductions through the mechanisms. To this end, the EU and its member States have instead proposed to limit the reductions that can be achieved by means of the mechanisms to a quote not exceeding 50% of the total assigned amount for each of the Annex I Parties. Not surprisingly, such a "strict" proposal has been strongly opposed by most of the other Parties to the UNFCCC, and the issue will be dealt in the framework of the "Action Plan" recently agreed at COP-4, with a view to possibly take a decision on the topic at COP-6, scheduled for November 2000 [8].

Joint Implementation allows Annex I Parties to transfer to or to acquire from other Annex I Parties emission reduction units (ERU's) resulting from projects aimed at reducing emissions or at enhancing removals by sinks of greenhouse gases. Thus one Annex I Party may promote and carry out a GHG emission reduction project in the territory of any other Annex I Party and then "use" the emission reductions obtained to partially satisfy its limitation or reduction commitment pursuant to the Kyoto Protocol [9].

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[6] On the Kyoto mechanisms (or flexibility mechanisms) see in general F. Missfeldt, *Flexibility Mechanisms: Which Path to take after Kyoto ?*, in RECIEL, 7:2, 1998, p. 128.
The three Kyoto mechanisms derive from the embryonic concept of Joint Implementation already contained in the UNFCCC. On this point see F. Yamin, *The Use of Joint Implementation to Increase Compliance with the Climate Change Convention*, in J. Cameron, J. Werksmann, P. Roderick (eds.), *Improving Compliance with International Environmental Law*, London, Earthscan, 1996, p. 229; O. Kuik *at al*., *Joint Implementation to Curb Climate Change*, Kluwer, Dordrecht, 1994.

[7] See A. Goria, J. Janssen, C. Kemfert, M. Montini, *Climate Change Policies and Measures after Kyoto*, in FEEM Newsletter, 2/1998, p. 13.

[8] On the "Plan of Action" agreed at COP-4 see further note 15.

[9] Pursuant to article 6 KP, a project can qualify under the JI mechanism provided that the following pre-requisites are satisfied: (1) the project must be approved by all Parties involved; (2) the condition of "additionality" must be fulfilled, that is the emission reduction must be additional to any that would otherwise occur; (3) the acquiring Party must be in compliance with its accounting and reporting obligations, set out in articles 5 and 7 KP; (4) the condition of the "supplementarity" must be fulfilled, that is the acquisition of ERU's in the framework of JI must be supplemental to domestic actions for the purpose of meeting the KP reduction commitment.

Clearly the great incentive for any Annex I Party to carry out a JI project consist in the possibility to achieve emission reductions abroad at a lower cost than it would otherwise bear if these reductions where achieved through domestic actions. For host countries, instead, the benefits to host a JI project can come in the form of secondary benefits, in the environmental, economic and social spheres.

The CDM constitutes a parallel mechanism to JI, the sole difference being that under the CDM projects aimed at reducing emissions or at enhancing removals by sinks of greenhouse gases are promoted by Annex I Parties and carried out in the territory of non-Annex I Parties, that is Parties without a binding emission limitation or reduction commitment [10].

The peculiarity of the CDM is the fact that it is designed to accomplish a two-fold objective. On the one side it aims at assisting Annex I Parties to partially fulfil their limitation or reduction commitments, on the other side it aims at helping non-Annex I countries to achieve sustainable development. The second objective makes the CDM probably the most interesting of the Kyoto mechanisms, in the light of its great potential in trying to convince LDC's to actively co-operate with industrialised countries and economies in transition to contribute to the fulfilment of the ultimate objective of the UNFCCC, that is to reduce anthropogenic GHG emissions in the atmosphere to a level that would prevent dangerous interference with the climate system.

An Emissions Trading (ET) mechanism will be established pursuant to article 17 KP in order to enable Parties with binding emission reduction targets to trade in emission reduction units (ERU's) in order to fulfil their respective commitments. Under the ET system, any Annex I Party included in Annex B of the Protocol will be allowed to freely sell or buy ERU's for the purpose of achieving the required reductions at a lower cost [11].

The ET mechanism is meant to permit to Parties facing high costs in achieving emission reductions at a domestic level to purchase ERU's from other countries which have obtained those reductions at a lower cost. After trade has taken place both Parties will need to adjust their domestic GHG reduction calculations in order to take into account the transferred ERU's. It is important to note that the ET system envisaged by the Kyoto Protocol is essentially an International Emission Trading scheme, but one or more Parties could also decide to combine such a system with a national or supra-national (e.g European-wide) concurrent ET scheme. It should be also possible for multinational companies to establish an international intra-company ET system in the future.

The text of the KP does not contain any detail on the functioning of ET, apart from the requirement of "supplementarity" already seen with reference to the other two Kyoto

[10] Pursuant to article 12 KP, emission reduction units (ERU's) resulting from CDM projects will be subject to certification by independent operational entities to be designated by the COPmop, provided that at least three pre-requisites are satisfied: (1) the participation in the CDM project must be voluntary and approved by all Parties involved; (2) the project must entail "real, measurable and long-term benefits related to the mitigation of climate change"; (3) the emission reductions obtained must be additional to any that would occur in the absence of the project.

[11] Annex B to the Kyoto Protocol includes all Annex I Parties with the sole exception of Turkey and Belarus, which refused to accept binding emission reduction commitments pursuant to the KP.

mechanism. Article 17 KP simply mandates the COP to define principles and modalities for ET. In this respect, critical issues to addressed by the COP will be *inter alia* the elaboration of clear guidelines in particular on certification, verification and monitoring of emission reduction, as well as on the involvement of legal entities and the establishment of credible compliance mechanisms.

The Kyoto Protocol signature and ratification process

The Kyoto Protocol will enter into force and will thus become legally binding 90 days after the date on which at least 55 countries, including developed countries accounting for at least 55% of Annex I countries 1990's carbon dioxide emissions, have signed and ratified it pursuant to article 25 KP.

The KP, at the moment of writing (December 1999), has been signed by 84 States, but has been ratified just by 8 countries, none of which is an Annex I Party [12]. The ratification of KP by industrialised countries has been delayed up to now by the position of the USA, which though having actively participated in the negotiation of the Protocol and having subsequently signed it at COP-4, do not intend to ratify the KP for the moment, arguing that the burden of reducing GHG emissions up to 2012 should not be left entirely on the shoulders of the Annex I Parties, but also developing countries, or at lest some of them, should take their own commitments. Recently, at COP-5, held in Bonn in October-November 1999, the EC and its member States have expressed the intention to proceed with the ratification of the KP, even without the USA. Hopefully, this announcement will be followed by a concrete action.

Notwithstanding the fact that they have just signed and not yet ratified the KP, the EC and its member States during the last two years have already started to develop policies and measures to mitigate and adapt to climate change, with a view of preparing to meet the commitments agreed at Kyoto. However, it is probably worth recalling hare that from a legal point of view, according to article 10 of the Vienna Convention on the Law of the Treaties, when we are dealing with an international treaty subject to ratification, signature has just a function of authentication of the text and does not establish consent to be bound. According to article 18 of the Vienna Convention, a signatory country has simply a general obligation to act in good faith to refrain from acts which might frustrate the objective of the treaty in question. The consent to the bound will be established only with the ratification, according to article 14 of the Vienna Convention, and the signature by itself does not create an obligation to ratify [13].

The competence to negotiate, sign and ratify an international treaty is disciplined by every country by its own national rules. In Italy, for instance, the negotiation phase is carried out by the Government, normally by means of a delegate of the Ministry of Foreign Affairs (although in many recent multilateral environmental agreements Italy has been represented by the Ministry of the Environment). After the signature of the treaty by the Government, according to article 87 of the Italian Constitution the power to ratify the treaty lies with the President of the Republic. In some cases, listed at article 80 of the Italian Constitution, ratification by the

[12] A constantly updated list of the status of signature and ratification to the Kyoto Protocol can be found at the Internet site of the Convention Secretariat www.unfccc.de .
[13] See I. Bronwlie, *Principles of Public International Law*, 5th ed., Oxford, 1998, p. 610.

President of the Republic must be preceded by a specific Act of authorisation from the Parliament [14].

In some cases, contrasts among the executive power which has negotiated and signed a treaty and the legislative power, which has to authorise its ratification, may emerge. The case of the United States and the Kyoto Protocol is exemplary in this sense. Despite the fact that the Congress has stated several times that it is not willing to assume the commitments deriving from the KP unless the developing countries also take some commitments, President Clinton during COP-4, following a Declaration from Argentina stating it is willing to accept a voluntary reduction commitment, decided to sign the Protocol. It is difficult to say whether the US Congress will be eventually persuaded to ratify the KP, even in absence of formal commitments placed on anon Annex I countries. What is clear is that even if the entry into force of the Protocol does not formally depend on the ratification of the USA, since the membership of 55 countries, including developed countries accounting for at least 55% of Annex I countries 1990's carbon dioxide emissions can be theoretically achieved even in the absence of the US ratification, from a substantial point of view the non-membership of the USA (which on its own accounts for nearly 25% of world GHG emissions) would greatly undermine the effectiveness and scope of the Protocol.

The Kyoto Protocol implementation problems

About one year after COP-3, held in Kyoto in December 1997, the Parties to the UNFCCC met in Buenos Aires for COP-4 from 2 to 13 November 1998. The Buenos Aires meeting was meant to start finding solutions for the several questions left unresolved in Kyoto, among which a primary role was played by the definition of rules and guidelines for the effective put into operation of the Kyoto mechanisms.

The Kyoto mechanisms were the subject of intense debate in Buenos Aires, but no consensus was reached on concrete steps to be taken with regard to their operational modalities. The Parties could only agree on adopting a specific "Plan of Action", which lists the priorities for further actions on the Kyoto mechanisms, as well as on other important issues such as policies and measures, compliance, transfer of technology and financial assistance for developing countries [15].

The Plan of Action also determined that the working plan agreed at Buenos Aires should be completed before the end of the year 2000, in time for COP-6. As a consequence, the COP-5, which was recently held in Bonn from 25 October to 5 November 1999, played merely a transitional role, monitoring the progress in fulfilling the "plan of Actions" agreed at Buenos

[14] See B.Conforti, *Diritto Internazionale*, 8th ed., Napoli, 1997, p. 68.

[15] Pursuant to the COP-4 decision listed as document FCCC/CP/1998/L.23 the constitutive items of the "Plan of Action" agreed at Buenos Aires are the following: (1) establishment of a financial mechanism; (2) development and transfer of technology; (3) implementation of articles 4.8 and 4.9 UNFCCC, regarding actions which are necessary to meet the specific needs and concerns of developing countries Parties, including actions related to funding, insurance and transfer of technology; (4) evaluation of the pilot phase of the activities implemented jointly; (5) development of guidelines and operational modalities for the Kyoto mechanisms; (6) preparation for the first session of COPmop (the Conference of the Parties serving as the meeting of the Parties to the Kyoto Protocol).

Aires, encouraging the Annex I Parties to proceed with the ratification of the Protocol and shifting all the important decisions to COP-6, which will be held in The Hague from 13 to 24 November 2000.

II. ITALIAN POLICIES AND MEASURES TO RESPOND TO CLIMATE CHANGE

Italian policies prior to the adoption of the Kyoto Protocol

It is well known that Italy is one of the most energy-efficient countries in the world [16]. This is probably due to the national energy policy, that, after the 1973 oil crisis and the 1987 national decision to abandon atomic energy and dismantle all the existing nuclear power plants, has constantly promoted the increase of energy efficiency and encouraged the progressive development of energy production from renewable sources [17].

This notwithstanding, up until recently, Italy did not have a climate policy as such. The first step in this direction came in fact with the approval by the *Interministerial Committee for Economic Planning* (CIPE) of the 1994 National Plan for the Containment of CO_2 Emissions [18]. The National Plan, which was approved immediately after the Italian ratification of the UN Framework Convention on Climate Change [19], aimed at the stabilisation of CO_2 emissions at the 1990 levels by the year 2000, in line with the decision taken by the EC Council in 1991 and 1993 [20].

The focus of the 1994 National Plan was mainly on the progressive enhancement of the efficiency of the existing power plants and the increased efficiency of the newly built ones, but no real effort was placed in trying to identify and promote other measures and interventions for the containment of CO_2 emissions.

Moreover, the 1994 National Plan was not accompanied by any financial measure or any economic incentive for the realisation of its objectives. Therefore, it can be now hardly contested that the 1994 National Plan was a false start of the Italian Climate Policy and in fact it did not affect at all the pattern of slow but progressive increase of CO_2 emissions from 1990 up to now.

Italian policies after the adoption of the Kyoto Protocol

As recalled above, the national greenhouse gases reduction commitment agreed by Italy, in the framework of the –8% EU bubble written in the Kyoto Protocol, corresponds to a –6.5% reduction below 1990 levels, to be achieved in the commitment period 2008-2012.

Considering the trend towards a slow but progressive increase of GHG emissions in the

[16] Source IEA/OECD, see Internet sites www.iea.org and www.oecd.org.
[17] See for instance the contribution given to the promotion of energy saving and the development of renewable energy sources by Law 9/91 (Law No. 9 of 9 January 19991, published in the Ordinary Supplement to the Official Journal of the Italian Republic (GURI) No. 13 of 16 January 1991) and Law 10/91 (Law No. 10 of 9 January 19991, published in the Ordinary Supplement to the GURI No. 13 of 16 January 1991).
[18] See Delibera CIPE 25 February 1994, published in the GURI No. 64 of 18 March 1994.
[19] The UNFCCC was ratified by Italy with the Law 65/94 (Law No. 65 of 15 January 1994, published in the Ordinary Supplement to the GURI No. 23 of 29 January 1991).
[20] See 1994 National Plan, at § 2.

absence of any intervention, and notwithstanding the delay placed by the position of the USA to the ratification of the KP by the Annex I countries, Italy, in line with the position of all the EC member States, started discussing about policies and measures to achieve the Kyoto commitments immediately after the adoption of the Kyoto Protocol, in December 1997.

About one year after the adoption of the KP, the *Interministerial Committee for Economic Planning* (CIPE) approved the 1998 National Plan for the reduction of GHG Emissions. [21] The National Plan departs largely from the sectoral approach of the 1994 National Plan and represents instead the result of a concerted effort by all the Ministries and the other administrative authorities involved in various ways and with different tasks in the achievement of the GHG reduction commitments.

The 1998 National Plan contains guidelines for the inter-sectoral policies and measures needed to achieve the reduction commitment agreed at Kyoto, with a view to organising and integrating them inside a common strategy. The 1998 National Plan identifies the priority among the possible policies and measures on the basis of three main criteria:

- enhance the emission reduction potential of the measures, programmes and interventions necessary in any case to comply with the European and national laws in the environmental, agricultural, energy and transport sectors;
- drive the modernisation of the Italian economy, including the energy and industrial system and the infrastructures for the shipment of goods, with an energy efficiency approach;
- promote the development of new low-emission technologies, with a particular stress on the production of energy from renewable sources.

On the basis of the above mentioned three criteria, the 1998 National Plan identifies six main domestic actions to which priority is to be given:

- increase of efficiency of electric power production;
- reduction of energy consumption in the transport sector;
- energy production from renewable sources;
- reduction of electricity consumption in industrial production, housing and tertiary sector;
- reduction of emissions in non-energy sectors;
- increase of the carbon absorption by forests.

Each of the six domestic actions entails various policies and measures, planned with the ultimate aim of achieving an overall reduction of 95/112 MtCO2, necessary to fulfil the Italian commitment of a –6.5% GHG emission reduction below 1990 levels in the period 2008-2012. The overall reduction objective of 95/112 MtCO2 is to be achieved in three periods. In the first period (2002) the target is a reduction of 20/25 MtCO2, in second period (2006) the target is a reduction of 40/45 MtCO2, while in the third and last period the global target of 95/112 MtCO2 should be reached.

Whether the achievement of the –6.5% commitment is achievable by Italy on the basis of the 1998 National Plan for the reduction of GHG emissions, considering the actual trend towards a slow but progressive increase of the GHG emissions rather than towards their stabilisation or reduction in the last few years, is an open issue, which, in any case, is out of the scope of

[21] See Delibera CIPE No. 137 of 19 November 1998, published in the GURI No. 33 of 10 February 1999.

the present evaluation of the planned Italian policies and measures [22].

It is in fact more interesting for the purpose of the present analysis to look at the kind and quality of the planned policies and measures destined to implement the six main actions identified by the 1998 National Plan, rather than trying to assess whether or not Italy will be able to meet the target.

The first action planned, namely the *increase of efficiency of electric power production*, will be mainly driven by needs and imperatives placed by factors external to the climate change policies. In particular, a progressive gain in efficiency of the energy power production plants in Italy will be forced by the implementation of the EC directive 91/61 on *integrated pollution prevention and control*.

The directive which has been recently implemented in Italy by Legislative Decree 372/99 [23], will determine for most of the plants with the larger impact on the environment the gradual replacement of the present environmental authorisations needed under Italian legislation with a single *integrated environmental authorisation*, which will contain all the necessary environmental prescription for each industrial plant. Such prescriptions will be based on the *best available techniques*, thus determining the progressive phasing out of the market of the most obsolete and energy-consuming power plants and their replacement with more modern plants with lower emissions. The whole process, coupled with the progressive liberalisation of the energy production market, which will necessarily entail the abandonment of power plants with high consumption and low output, will contribute to a considerable increase of efficiency and a consequent reduction of GHG emissions.

The second action, namely the *reduction of energy consumption in the transport sector*, will be progressively achieved through the adoption of specific policies and measures aimed at rendering the Italian transport system more "sustainable". The first step will consist in a series of measures under the heading of the promotion of a *sustainable urban mobility*, which will try on the one side to reduce the emissions from cars by promoting an increased efficiency of new vehicles put into the market, by substituting the oldest vehicles owned by public transport companies with newer ones with lower emissions and by giving incentives to private parties for the gradual replacement of old vehicles with new ones with lower emissions, and on the other side by imposing a gradual limitation of the use of private transport in bigger cities accompanied by an enlarged offer of public transport, with the construction of new rail and tram links, in order to lead to the increase of the presently low share of use of public transport in the bigger cities. Moreover, measures to promote a progressive transfer of the shipment of goods from roads to railways and ships will be put in place and bio-fuels will be mixed with

[22] A very hot issue related to the planned GHG emission reduction contained in the 1998 Italian Plan is the issue of the costs. According to the estimation of the Italian Government the overall costs for the planned 95/112 MtCo2 reduction up until the period 2008-2012 will amount roughly to 100.000 billion Liras. However, the planned emission reduction will involve savings in the consumption of primary energy sources estimated at a level equivalent to 80-85 billion Liras. Therefore, the real cost for the Italian economy deriving from the implementation of the 1998 national Plan should not exceed 20-25 billion Liras in 10-14 years.

[23] The EC directive 91/62 on integrated pollution prevention and control has been implemented for existing plants by the Legislative Decree 372/99 (Legislative Decree No. 372 of 4 August 1999, published in the GURI No. 252 of 26 October 1999). For newly built plant, the adoption of the new framework Law on Environmental Impact assessment (EIA) and Integrated Pollution Prevention and Control (IPPC) is expected shortly.

conventional gasoline and diesel fuels to reduce GHG emissions.

The third action, that is *energy production from renewable sources*, should see Italy at the forefront in Europe. In fact, whereas at European level the EC Commission has planned an increase of the contribution of renewable sources from 2% to 4% from now up to the period 2008-2012, the Italian Government has declared to have much more ambitious targets for this sector. In particular, the Italian efforts will focus on the progressive development of energy production from biomasses, eolic and photovoltaic and thermal-solar sources.

In this context, priority will be given to the development of energy production form biomasses, which can contribute at the same time at creating a market for most agricultural "waste" and by-products and possibly at promoting the riforestation and afforestation of some parts of country.

The fourth action, that is the *reduction of electricity consumption in industrial production, housing and tertiary sector*, will be promoted mainly with the development of higher standards of energy efficiency for new electric equipments placed into the market and the gradual replacement of the older ones. This result will be achieved by the establishment of new technical norms and standards, possibly by means of *voluntary agreements* negotiated with the industry sector rather than autonomously imposed by the Government.

The fifth action, namely the *reduction of emissions in non-energy sectors*, concerns some specific interventions directed to the chemical industry (for the reduction of N_2O emissions), to the landfill management and to the zootechnic sector (for the reduction of CH_4 emissions), and to the promotion of an increase rate of recycling of plastic, paper and glass waste.

The sixth and last action, namely the *increase of the carbon absorption by forests*, acting as sinks of GHG emissions, has not been properly developed yet in the 1998 National Plan, mainly due to the technical uncertainties still remaining in the definition of the procedures to calculate the absorption potential of the forests. However, as already mentioned above, the afforestation and riforestation is considered with interest by the Italian Government, due its possible contribution to a better the environmental quality of the country as a whole, and the contribution of the sixth action to the achievement of the overall GHG emission reduction commitments might be finally much greater than actually stated in the National Plan.

As we can see, the 1998 National Plan is exclusively based on policies and measures of mitigation to be performed at domestic level. No room is left in the Plan for the development of the flexibility mechanisms of the Kyoto Protocol. The National Plan, in fact contains a reference to the flexibility mechanisms, and does not exclude in principle on the side the possibility to give incentives to the concrete developments of joint implementation and clean development mechanisms project by Italian companies, and on the other side the possibility to create a national emission trading regime. However, in concrete terms, nothing has been done yet in this direction and Italy does not seem likely to be at the forefront in the implementation of the flexibility mechanisms in the next few years.

Placing the Kyoto Protocol in a Mediterranean context

The Kyoto Protocol does not only concern environmental protection. It generally affects the patterns of economic development of the industrialised countries. Its potential impact on the industry, energy and transport sectors will be much greater that it might seem at a first reading.

As we can see from the above analysis of the Italian policies and measures planned to implement the Kyoto Protocol, the Italian Government has seen up to now the KP has an opportunity to "drive" the economic development of the country in the next decades towards a sustainability scenario. The KP is seen an instrument which can enable the Government to accelerate, rationalise and co-ordinate a move towards a sustainable and more efficient pattern of development, which is seen as inevitable anyway.

Whether this reading of the KP made by the Italian Government is too optimistic or too naive is an issue that cannot be solved now, but will need to be addressed in some years time. However, judging by the way Italy has negotiated its national reduction commitment (which has been considered by many economic analysts disproportionate and excessive) and by its will to reach it mainly (if not exclusively) by means of domestic policies and measures, leaving little room for the flexibility mechanisms, it seems that Italy has probably chosen to be among the countries who wish to take a proactive approach towards the Kyoto commitments.

Obviously, the determination shown by the Italian Government by approving the 1998 National Plan, will need to be backed by the Italian Parliament, which has to "authorise" with a specific Act the ratification of the Kyoto Protocol by the President of the Republic. On the other side, the "will" of the Government to be at the forefront in responding to climate change will need to be followed by the adoption of the various implementing measures, mainly in the form of Ministerial decrees, which are necessary to give effect to the six actions and the related measures identified by the Italian 1998 National Plan.

The pro-active position of Italy, which by and large reflects that of most countries of the EU, needs now to be placed in a Mediterranean context to see which role could play the implementation of the KP for the "*sustainable development*" of the Mediterranean area as a whole.

I speak of "sustainable development", not just because this is one of the principle on which the 1992 Framework Convention on Climate Change is based, but also because the implementation of the KP, as stated above, cannot be seen in isolation from the economic policies of the countries called to implement the reduction commitments agreed at Kyoto, but ought to be considered as one of the key factors which will shape the economic policy of those countries in the next years. In this sense, the questions to be asked are the following: is it possible to envisage a role for the KP in the perspective of a European and Mediterranean sustainable growth ? Has the KP a role to play in the Euro-Mediterranean partnership process

(also known as Barcelona process) launched in 1995 [24] ?

The Euro-Mediterranean partnership process was launched at Barcelona in 1995 as a process of progressive strengthening of the political, socio-economic and cultural co-operation among the EU countries on the one side and the Mediterranean countries on the other side [25]. The 1995 Barcelona declaration provides *inter alia* the framework for an enhanced economic and financial partnership, which is to be implemented through a series of bilateral Euro-Mediterranean association agreements, between the European Community of the one side and the non-EC Mediterranean countries on the other side [26].

All Euro-Mediterranean association agreements foresee the creation of a free trade area, compatible with the WTO requirements. In the free trade areas, once established, custom duties for industrial products will be gradually eliminated and a progressive liberalisation of trade in agricultural products will be promoted, through the application of preferential access to the respective markets on a reciprocal basis. With the time being, the co-operation should be extended to other sectors, such as for instance services and public procurement, while the links among EC and non EC Mediterranean countries become stronger.

A strengthened co-operation should cover the industry as well as the agricultural sectors, while a special role should be played by the development of projects in the fields of energy and of infrastructures, especially in the transport sector. In all these areas, however, economic development should be reconciled with environmental protection, with the aim of integrating environmental concerns into the relevant aspects of economic policy and of mitigating the negative environmental consequences which might result from it.

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[24] The official internet site of the Euro-Mediterranean Partnership (www.euromed.net) contains a lot of information on the Partnership. An *Information Note* found on the site, summarises in a few words the origin, the objectives and the institutional frameworks of the Barcelona Process as follows: "The Euro-Mediterranean Conference of Ministers of Foreign Affairs held in Barcelona on November 27-28, 1995 marked the starting point of the Euro-Mediterranean Partnership (Barcelona Process), a wide framework of political, economic and social relations between the 15 Member States of the European Union and the 12 Partners of the southern Mediterranean (Algeria, Cyprus, Egypt, Israel, Jordan, Lebanon, Malta, Morocco, Palestinian Authority, Syria, Tunisia, Turkey). In the Barcelona Declaration, the 27 Partners established the 3 main objectives of the Partnership: (1) the definition of a common area of peace and stability through the reinforcement of political and security dialogue (Political and Security Chapter); (2) the construction of a zone of shared prosperity through an economic and financial partnership and the gradual establishment of a free trade zone (Economic and Financial Chapter); (3) the rapprochement between peoples through a social, cultural and human partnership aimed at encouraging understanding between cultures and exchanges between civil societies (Social, Cultural and Human Chapter). The Euro-Mediterranean Partnership comprises two complementary frameworks, the bilateral and the regional: (A) At the bilateral level, the Union negotiates the Euro-Mediterranean Association Agreements (see information note on "Progress on the Euro-Mediterranean Association Agreements "). These agreements reflect the general principles governing the new Euro-Mediterranean relationship, although they each contain characteristics specific to the relations between the EU and each partner. (B) At the regional level, regional dialogue represents one of the most innovative aspects of the Partnership, covering at the same time the political, economic and cultural fields (regional co-operation)."

[25] In the preamble of the Barcelona Declaration the Euro-Mediterranean partnership is defined as consisting in the three aspects: (1) strengthened political dialogue on a regular basis; (2) the development of economic and financial co-operation; (3) greater emphasis on the social, cultural and human dimension.

[26] According to the Barcelona Declaration, the economic and financial partnership will be based on (1) the progressive establishment of a free-trade area; (2) the implementation of appropriate economic co-operation and concerted action in the relevant areas; (3) a substantial increase in the European Union's financial assistance to its partners.

Looking at the above mentioned programme of the Euro-Mediterranean partnership, it appears that it may constitute an ideal ground to put into practice the concept of sustainable development in the context of international economic co-operation. It is in this context, that the KP may play a role as an instrument which may promote sustainable development while implementing some of the aims of the Barcelona partnership process.

We must consider to this end the flexibility mechanisms, and in particular the *Clean Development Mechanism* (CDM), which provides for the opportunity for Annex I countries (essentially industrialised countries) to carry out projects in non-Annex I countries (essentially developing countries), aiming at achieving a reduction of GHG emissions. The GHG emission reductions achieved in a non-Annex I country can be then "used" by the promoting Annex I country to partially meet its reduction commitment negotiated under the Kyoto Protocol.

It is obvious, in my opinion, the role that the CDM could play in a Euro-Mediterranean perspective. The CDM placed in a Mediterranean context, that is pursued through the development of inter-Mediterranean agreements and projects for GHG reductions, among countries or directly among firms, could in fact help EC countries to partially achieve their Kyoto commitments at a lower cost and, at the same time, could serve various aims of the Euro-Mediterranean "design", namely the promotion of an increased co-operation in the fields of industry, energy and transport.

The "win-win" perspective arising from the placement of the Kyoto Protocol, and in particular of the CDM mechanism, in a Euro-Mediterranean context, could also serve another purpose for the EC as a whole. It could in fact make the implementation of the KP "convenient" for the EC countries even in the absence of an US ratification, despite the high economic costs inevitably associated with it. The development of an increased economic co-operation driven by the implementation of the KP could in fact help to foster the economic growth of the Mediterranean countries concerned, while at the same time expanding the market for the European products, reducing the "human pressure" of immigrants from those countries towards Europe and ultimately contribute to a greater stability and peace in the Euro-Mediterranean area.

In my view, therefore, the Kyoto Protocol rather than a potential financial "burden" on the national economies and an international treaty which seem to serve just the cause of environmental protection should be seen as an instrument of enhanced economic growth under the heading of sustainable development.