CHAPTER FOUR

BIODIVERSITY CONSERVATION: GLOBAL CONTEXT

INTRODUCTION

Biodiversity, the loss, threats to and the need for conservation is a global concern. This year, the United Nations has through its United Nations General Assembly resolution 61/203, declared 2010 as the International Year for Biodiversity (2010) with a tag line that reads, "Biodiversity is Life, Biodiversity is Our Life"[1]. There are at least seven key multilateral agreements that bind the world community, or at least a substantial portion of it, in taking action towards protecting, conserving and ensuring the sustainable use of biodiversity.

What is also important to note is that there are key declarations that set the tone towards 'linking' the world community together to act, particularly the Declaration of the United Nations Conference on the Human Environment ("Stockholm Declaration) 1972[2], the World Conservation Strategy 1980[3] and the Rio Declaration on Environment and Development and Agenda 21 (Rio Declaration) 1992[4]. These Declarations have served as the catalyst towards gearing nations to forge multilateral agreements, whereby the principles that shape them and the strategies as well as plan

[1] Please refer to http://www.cbd.int/2010/about/ for a detailed plan for the celebration.
[2] Please refer to the site which provides information and text on the Declaration. Last accessed 24 January2010. http://www.unep.org/Documents.Multilingual/Default.asp?DocumentID=97&ArticleID=1503&l=en. See also Sands, P. 2003. Principles of International Environmental Law (second edition). Cambridge University Press. 1116pgs. See pages 35-40. The Stockholm Declaration 1972 is followed by an Action Plan containing 109 recommendations, which is not discussed here.
[3] IUCN-UNEP-WWF, 1980. World Conservation Strategy: Living Resource Conservation for sustainable Development. 77pps. See also Sands, P. 2003. Principles of International Environmental Law (second edition). Cambridge University Press. 1116pgs. See pages 47-48.
[4] Please refer to the site which provides information and text on the Declaration. Last accessed 24 January 2010. http://www.un.org/esa/dsd/agenda21/index.shtml. See also Sands, P. 2003. Principles of International Environmental Law (second edition). Cambridge University Press. 1116pgs. See pages 52-59.

of action therein these Declarations serving as the 'purposes' that shape the agreements[5]. Focus will be given on four key non-binding documents, i.e. :

i. Declaration of the United Nations Conference on Human and Environment (Stockholm Convention) 1972;

ii. World Conservation Strategy 1980;

iii. The Rio Declaration on Environment and Development and Agenda 21; and

iv. The Johannesburg Plan of Implementation 2002;

which will be looked at briefly to identify key principles that will be relevant to statutory drafting (principles that will serve as the core values to be upheld by the law); and areas of interest that should be taken into account when drafting an integrative statutory framework. Following on from the discussion on the non-binding documents, will be a brief discussion on global multilateral environmental agreements (MEAs) to which Malaysia is party to, and key aspects that have bearing, particularly in Malaysia meeting its obligations, that should be considered and factored in to the integrative statutory framework. They are:

i. Convention on Wetlands of International Importance especially as Waterfowl Habitat 1971 (RAMSAR)[6];

ii. World Heritage Convention 1972 (WHC)[7];

iii. Convention on International Trade in Endangered Species of Wild Fauna and Flora 1973 (CITES)[8];

iv. United Nations Convention on the Law of the Sea 1982 (UNCLOS)[9];

v. Convention on Biological Diversity 1992 (CBD)[10];

[5] Sands, P. 2003. Principles of International Environmental Law (second edition). Cambridge University Press. 1116pgs. See pages Chapter 2, pages 25-69.
[6] See www.ramsar.org. Last accessed 24 January 2010. Malaysia became a party to RAMSAR on 10th March 1995.
[7] See www.whc.unesco.org. Last accessed 24 January 2010. Malaysia became Party to WHC on 7th December 1998
[8] See www.cites.org. Last accessed 24 January 2010. Malaysia became a Party on 18th January 1978.
[9] See http://www.un.org/Depts/los/convention_agreements/texts/unclos/closindx.htm. Last accessed 24 January 2010. Malaysia is a party to the Convention sine 14 October 1996.
[10] See www.cbd.int. Last accessed 24 January 2010. Malaysia became a Party on 24th June 1994.

In addition a short discussion is also made on the position of ASEAN, and the current direction it is taking that may have bearing on the drafting of the statutory framework. This Chapter does not intend to review the merits or demerits of each instrument or platform discussed, instead, it shall identify and take forward key aspects for consideration when discussing existing statutory coverage in Malaysia as well as drafting options for framing an integrative statutory framework for biodiversity conservation in Malaysia.

4.1. KEY ASPECTS FROM NON-BINDING INTERNATIONAL DOCUMENTS

As stated above in the Introduction, this section will briefly look at four documents, paying special attention to principles (where relevant) and key aspects that can serve a key driving values when drafting an integrative statute.

4.1.1. Declaration of the United Nations Conference on the Human Environment ("Stockholm Declaration) 1972

The Stockholm Declaration 1972 begins with a paragraph that spell out man's influence on the environment, i.e. "Man is both creature and moulder of his environment, which gives him physical sustenance and affords him the opportunity for intellectual, moral, social and spiritual growth. In the long and tortuous evolution of the human race on this planet a stage has been reached when, through the rapid acceleration of science and technology, man has acquired the power to transform his environment in countless ways and on an unprecedented scale. Both aspects of man's environment, the natural and the man-made, are essential to his well-being and to the enjoyment of basic human rights the right to life itself"[11].

[11] See footnote 78.

The Stockholm Declaration 1972 calls for the exertion of "common efforts for the preservation and improvement of the human environment, for the benefit of all the people and for their posterity"[12]. There are 26 principles in the Stockholm Declaration 1972 that spell out key issues and a set of norms for conduct that can help guide future action, of which there 17 key principles (Principles 1-8; 10-14; and 18-21) that flags the norms to be adopted in relation to biodiversity.

These principles set the direction, that can be found in several multilateral environmental agreements ("MEAs"), such as the World Heritage Convention 1972 ("WHC"), the Convention on Wetlands of International Importance especially as Waterfowl Habitat 1971 ("RAMSAR"), the Convention on International Trade on Endangered Species 1973 ("CITES") and the Convention on Biological Diversity 1992 ("CBD"). The key principles that are linked to biodiversity conservation, which have been clustered in accoradance to sub topics of relevance are:

A. Rights, responsibility and accountability

a. Principle 21: States have, in accordance with the Charter of the United Nations and the principles of international law, 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**.
b. Principle 1: Man has the fundamental right to freedom, equality and adequate conditions of life, in an environment of a quality that permits a life of dignity and wellbeing, and he bears a solemn responsibility to **protect and improve the environment for present and future**

[12] See footnote 78, paragraph 7.

generations. In this respect, policies promoting or perpetuating apartheid, racial segregation, discrimination, colonial and other forms of oppression and foreign domination stand condemned and must be eliminated. This principle sets the tone for what will be known as sustainable development, as it links responsibility towards both present and future generations.

c. Principle 4: Man has a special responsibility to **safeguard and wisely manage** the heritage of wildlife and its habitat, which are now gravely imperilled by a combination of adverse factors. Nature conservation, including wildlife, must therefore receive importance in **planning for economic development**. Here, a nod is made on the need to use resources wisely as a means for economic development.

d. Principle 5: The non-renewable resources of the earth must be employed in such a way as to **guard against the danger of their future exhaustion** and to ensure that **benefits** from such employment are **shared by all mankind**. Here the concept of 'common heritage of mankind' is introduced, given the rise in mining in the 1970s[13].

e. Principle 6: The discharge of toxic substances or of other substances and the release of heat, in such quantities or concentrations as to **exceed the capacity of the environment** to render them harmless, **must be halted** in order to ensure that serious or irreversible damage is not inflicted upon ecosystems. The just struggle of the peoples of ill countries against pollution should be supported. Here the concept of harm and liability is introduced so as to enable the structuring of responsibility and accountability[14].

[13] Chris Ballard and Glenn Banks, 2003. Resource Wars: The Anthropology of Mining. *Annual Review of Anthropology.* Vol. 32, (2003), pp. 287-313

[14] Robert V. Percival, 2010. Liability for Environmental Harm and Emerging Global Environmental Law, 25 Md. J. Int'L. 3 7 (2010)

f. Principle 7: States shall take all possible steps **to prevent pollution** of the seas by substances that are liable to create hazards to human health, to harm living resources and marine life, to damage amenities or to interfere with other legitimate uses of the sea. The importance of the marine environment is given prominence, particularly in light of evidence then that the oceans were becoming garbage receptacles and pollution that were impacting on the marine diversity[15].

g. Principle 22: States shall cooperate to develop further the international law regarding liability and compensation for the victims of pollution and other environmental damage caused by activities within the jurisdiction or control of such States to areas beyond their jurisdiction.

h. Principle 23: Without prejudice to such criteria as may be agreed upon by the international community, or to standards which will have to be determined nationally, it will be essential in all cases to consider the systems of values prevailing in each country, and the extent of the applicability of standards which are valid for the most advanced countries but which may be inappropriate and of unwarranted social cost for the developing countries.

i. Principle 24: International matters concerning the protection and improvement of the environment should be handled in a cooperative spirit by all countries, big and small, on an equal footing. Cooperation through multilateral or bilateral arrangements or other appropriate means is essential to effectively control, prevent, reduce and eliminate adverse environmental effects resulting from activities conducted in all spheres, in

[15] Florencio J. Yuzon, 1997. Full Speed Ahead: International Law concerning Marine Pollution and the United States Navy - Steaming towards State Responsibility and Compliance, 9 Pace Int'l L. Rev. 57 (1997).

such a way that due account is taken of the sovereignty and interests of all States.

j. Principle 25: States shall ensure that international organizations play a coordinated, efficient and dynamic role for the protection and improvement of the environment.

k. Principle 26: Man and his environment must be spared the effects of nuclear weapons and all other means of mass destruction. States must strive to reach prompt agreement, in the relevant international organs, on the elimination and complete destruction of such weapons.

B. "Sustainable development"

l. Principle 2: The natural resources of the earth, including the air, water, land, flora and fauna and especially representative samples of natural ecosystems, must be **safeguarded for the benefit of present and future generations through careful planning or management**, as appropriate. Again, elements of intergenerational responsibility over Earth's resources are flagged.

m. Principle 3: The capacity of the earth to produce vital renewable resources must be **maintained** and, wherever practicable, **restored or improved**.

n. Principle 8: Economic and social development is essential for ensuring a favourable living and working environment for man and for **creating conditions on earth that are necessary for the improvement of the quality of life**. The link here is between the state of the environment and quality of life, and human development.

C. Scientific, Technical, Technological and financial assistance

o. Principle 9: Environmental deficiencies generated by the conditions of under-development and natural disasters pose grave problems and can best

be remedied by accelerated development through the **transfer of substantial quantities of financial and technological assistance** as a supplement to the domestic effort of the developing countries and such timely assistance as may be required. This principle stresses on the need for technological and financial assistance, which sets the theme in most MEAs, for example in the CBD at Articles 18 (technical and scientific cooperation) and 21 (financial mechanisms) respectively.

p. Principle 18: **Science and technology**, as part of their contribution to economic and social development, **must be applied to the identification, avoidance and control of environmental risks and the solution of environmental problems** and for the common good of mankind.

D. Management and planning approaches

q. Principle 13: In order to achieve a more r**ational management of resources** and thus to **improve the environment**, States should adopt an **integrated and coordinated approach** to their **development planning** so as to ensure that development is **compatible with the need to protect and improve environment** for the benefit of their population. Integrated approaches have become a much promoted approach, for example in water resources conservation the integrated water resources management[16] has become a mainstay at the international *fora*.

r. Principle 14: **Rational planning** constitutes an essential **tool for reconciling any conflict between the needs of development and the need to protect and improve the environment**.

s. Principle 15: **Planning must be applied to human settlements and urbanization** with a view to avoiding adverse effects on the environment

[16] See factsheet on IWRM at the Global Water Partnership website at http://www.gwp.org/The-Challenge/What-is-IWRM/

and obtaining maximum social, economic and environmental benefits for all. In this respect projects, which are designed for colonialist and racist domination, must be abandoned.

E. Awareness and education

t. Principle 19: **Education** in environmental matters, for the younger generation as well as adults, giving due consideration to the underprivileged, is essential in order to broaden the basis for an enlightened opinion and responsible conduct by individuals, enterprises and communities in **protecting and improving the environment** in its full human dimension. It is also essential that mass media of **communications** avoid contributing to the deterioration of the environment, but, on the contrary, **disseminates information of an educational nature** on the need to project and improve the environment in order to enable man to develop in every respect.

F. Research and Development

u. Principle 20: **Scientific research and development** in the context of environmental problems, both national and multinational, **must be promoted** in all countries, especially the developing countries. In this connection, the **free flow of up-to-date scientific information** and **transfer of experience** must be supported and assisted, to facilitate the solution of environmental problems; **environmental technologies** should **be made available** to developing countries on terms which would encourage their wide dissemination without constituting an economic burden on the developing countries.

The six clusters above indicate, that emphasis has been given towards framing rights, responsibility and accountability of countries, setting out the key aspects to be considered when a right is claimed, and the limits of actions, and the precautionary measures to be considered and adopted, so as to ensure that natural resources, particularly non-renewable resources are not depleted to human detriment.

Key points to be considered, are the means to balance both human and environmental interests as well as structuring responsibility and accountability for action, which will require 'strong' science to help bolster evidence. Also noted is the need to extend responsibility to ensure coming generations are not affected, which would require strong measures for conservation.

4.1.2. World Conservation Strategy: Living Resources Conservation for Sustainable Development 1980

The World Conservation Strategy (WCS) is a document prepared by the International Union for the Conservation of Nature (IUCN), which was commissioned by the United Nations Environment Programme (UNEP) together with the World Wildlife Fund (WWF). The WCS is intended to represent a consensus of policy on conservation efforts in the context of world development with the aim to help advance the achievement of sustainable development through the conservation of living resources[17].

The aim is further explained in the executive summary as to include three areas of concern[18], i.e.:

a. to maintain essential ecological processes and life-support systems (such as

[17] The pdf version of the document may be accessed at this website: http://data.iucn.org/dbtw-wpd/html/WCS-004/cover.html (last accessed 24 January 2010)

[18] See executive summary accessed at http://data.iucn.org/dbtw-wpd/html/WCS-004/section4.html

soil regeneration and protection, the recycling of nutrients, and the cleansing of waters), on which human survival and development depend;

b. to preserve genetic diversity (the range of genetic material found in the world's organisms), on which depend the functioning of many of the above processes and life-support systems, the breeding programmes necessary for the protection and improvement of cultivated plants, domesticated animals and microorganisms, as well as much scientific and medical advance, technical innovation, and the security of the many industries that use living resources;

c. to ensure the sustainable utilization of species and ecosystems (notably fish and other wildlife, forests and grazing lands), which support millions of rural communities as well as major industries.

These areas can be seen in the CBD, and the tenets proposed herein are also reflected in the CBD, which ties them all up in a biodiversity basket. The WCS, goes on to explain the contribution of living resource conservation to human survival and to sustainable development; identifies the priority conservation issues and the main requirements for dealing with them; and proposes effective ways for achieving the Strategy's aim. Sixteen priority national actions were highlighted, which include[19]:

a. Preparation and implementation of national and/or subnational conservation strategies, which will require countries to integrate approaches in relation to living resources management that will require a cross-sectoral interdisciplinary approach; improve understanding of the dynamics and capacities of ecosystems, so as to facilitate determination and retention of options; and mix curative and preventative measures focusing on causes and symptoms.

[19] *Ibid.* See also Chapters 8-12.

b. The adoption of anticipatory environmental policies as well as cross-sectoral conservation policy, with corresponding indicators of conservation performance in national accounting systems.
c. Conduct of ecosystem evaluation and environmental assessments.
d. Adoptions of allocation procedures for land and water resources based on ecosystems evaluation and environmental assessments.
e. Review legislations.
f. Strengthen capacity via training and provisions of facilities; conduct research as well as raise awareness.
g. Ensure participation in decision-making.

Key points for consideration here is that the WCs gives great emphasis on understanding the state of the environment, and uses the ecosystems approach as measures to determine state, condition as well as options for action. What is also interesting for consideration is that the insistence of a cross-disciplinary approach which suggest an integration of different expertise, skills and techniques as well, which would be interesting to factor in an integrative statutory framework, i.e. the structuring of a mechanism or process or procedure that will bring together different agencies towards the attainment of a particular objective or aim.

4.1.3. The Rio Declaration on Environment and Development and Agenda 21[20]

The 1992 United Nations Conference on Environment and Development (also known as the Earth Summit) in Rio de Janeiro Brazil saw the adoption of the Rio Declaration on Environment and Development 1992 ("Rio Declaration") 1992, and its accompanying document, a comprehensive plan of action, which is referred to as Agenda 21, that addresses four main areas of concern, i.e. social and economic dimension; conservation and management of resources; strengthening of major group; and means of implementation.

It gives emphasis on the role and responsibility that arises in environmental management and development; major groups (women, youth and indigenous groups are flagged) that can play a role; the need to adopt a precautionary approach in lieu of science or information; and involvement and participation of various stakeholders in decision making related to the environment. It spells out the tenets that support sustainable development, which 'mainstreams' the environment together with social and economic development.

Of the 27 principles set out in the Rio Declaration, which to a certain extent carries forward the principles of Stockholm Declaration, 17 key principles, which can be arranged according to clusters have been identified to have bearing on biodiversity conservation. There are six clusters; rights, responsibility and accountability looks at principles that guide obligations that should govern country actions; sustainable development, where the balance between man and environment spanning generations are flagged for consideration in any action by any country; special needs of developing

[20] Report of the United Nations Conference on Environment and Development, Rio de Janeiro, 3-14 June 1992 (United Nations publication, Sales No. E.93.I.8 and corrigenda). For Agenda 21 please refer to the following website: http://www.un.org/esa/dsd/agenda21/

countries, which also looks at cooperation and assistance; capacity building with encompasses awareness and education; participation which looks at the inclusion of all groups with a stake and interest to carry out measures that will support sustainable development; and science and technology which looks at the various aspects related to assistance and development.

The clusters and related principles are as shown below:

A. Rights, responsibility and accountability

a. Principle 1: Human beings are at the centre of concerns for sustainable development. They are entitled to a healthy and productive life in harmony with nature.
b. Principle 2: States have, in accordance with the Charter of the United Nations and the principles of international law, the sovereign right to exploit their own resources pursuant to their own environmental and developmental 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.
c. Principle 3: The right to development must be fulfilled so as to equitably meet developmental and environmental needs of present and future generations.
d. Principle 7: States shall cooperate in a spirit of global partnership to conserve, protect and restore the health and integrity of the Earth's ecosystem. In view of the different contributions to global environmental degradation, States have common but differentiated responsibilities. The developed countries acknowledge the responsibility that they bear in the international pursuit to sustainable development in view of the pressures

their societies place on the global environment and of the technologies and financial resources they command.

e. Principle 11: States shall enact effective environmental legislation. Environmental standards, management objectives and priorities should reflect the environmental and development context to which they apply. Standards applied by some countries may be inappropriate and of unwarranted economic and social cost to other countries, in particular developing countries.

f. Principle 13: States shall develop national law regarding liability and compensation for the victims of pollution and other environmental damage. States shall also cooperate in an expeditious and more determined manner to develop further international law regarding liability and compensation for adverse effects of environmental damage caused by activities within their jurisdiction or control to areas beyond their jurisdiction.

g. Principle 14: States should effectively cooperate to discourage or prevent the relocation and transfer to other States of any activities and substances that cause severe environmental degradation or are found to be harmful to human health.

h. Principle 15: In order to protect the environment, the precautionary approach shall be widely applied by States according to their capabilities. Where there are threats of serious or irreversible damage, lack of full scientific certainty shall not be used as a reason for postponing cost-effective measures to prevent environmental degradation.

i. Principle 16: National authorities should endeavour to promote the internalization of environmental costs and the use of economic

instruments, taking into account the approach that the polluter should, in principle, bear the cost of pollution, with due regard to the public interest and without distorting international trade and investment.

j. Principle 17: Environmental impact assessment, as a national instrument, shall be undertaken for proposed activities that are likely to have a significant adverse impact on the environment and are subject to a decision of a competent national authority.

k. Principle 18: States shall immediately notify other States of any natural disasters or other emergencies that are likely to produce sudden harmful effects on the environment of those States. Every effort shall be made by the international community to help States so afflicted.

l. Principle 19: States shall provide prior and timely notification and relevant information to potentially affected States on activities that may have a significant adverse transboundary environmental effect and shall consult with those States at an early stage and in good faith.

m. Principle 23: The environment and natural resources of people under oppression, domination and occupation shall be protected.

n. Principle 24: Warfare is inherently destructive of sustainable development. States shall therefore respect international law providing protection for the environment in times of armed conflict and cooperate in its further development, as necessary.

o. Principle 25: Peace, development and environmental protection are interdependent and indivisible.

p. Principle 26: States shall resolve all their environmental disputes peacefully and by appropriate means in accordance with the Charter of the United Nations.

q. Principle 27: States and people shall cooperate in good faith and in a spirit of partnership in the fulfilment of the principles embodied in this Declaration and in the further development of international law in the field of sustainable development.

B. Sustainable Development

r. Principle 4: In order to achieve sustainable development, environmental protection shall constitute an integral part of the development process and cannot be considered in isolation from it.

s. Principle 5: All States and all people shall cooperate in the essential task of eradicating poverty as an indispensable requirement for sustainable development, in order to decrease the disparities in standards of living and better meet the needs of the majority of the people of the world.

t. Principle 8: To achieve sustainable development and a higher quality of life for all people, States should reduce and eliminate unsustainable patterns of production and consumption and promote appropriate demographic policies.

C. Cooperation with special emphasis on special status for developing countries

u. Principle 6: The special situation and needs of developing countries, particularly the least developed and those most environmentally vulnerable, shall be given special priority. International actions in the field of environment and development should also address the interests and needs of all countries.

v. Principle 12: States should cooperate to promote a supportive and open international economic system that would lead to economic growth and sustainable development in all countries, to better address the problems of environmental degradation. Trade policy measures for environmental

purposes should not constitute a means of arbitrary or unjustifiable discrimination or a disguised restriction on international trade. Unilateral actions to deal with environmental challenges outside the jurisdiction of the importing country should be avoided. Environmental measures addressing transboundary or global environmental problems should, as far as possible, be based on an international consensus.

D. Capacity Building

w. Principle 9: States should cooperate to strengthen endogenous capacity building for sustainable development by improving scientific understanding through exchanges of scientific and technological knowledge, and by enhancing the development, adaptation, diffusion and transfer of technologies, including new and innovative technologies.

x. Principle 21: The creativity, ideals and courage of the youth of the world should be mobilized to forge a global partnership in order to achieve sustainable development and ensure a better future for all.

E. Participation

y. Principle 10: Environmental issues are best handled with participation of all concerned citizens, at the relevant level. At the national level, each individual shall have appropriate access to information concerning the environment that is held by public authorities, including information on hazardous materials and activities in their communities, and the opportunity to participate in decision-making processes. States shall facilitate and encourage public awareness and participation by making information widely available. Effective access to judicial and administrative proceedings, including redress and remedy, shall be provided.

z. Principle 20: Women have a vital role in environmental management and development. Their full participation is therefore essential to achieve sustainable development.

aa. Principle 22: Indigenous people and their communities and other local communities have a vital role in environmental management and development because of their knowledge and traditional practices. States should recognize and duly support their identity, culture and interests and enable their effective participation in the achievement of sustainable development.

Based on the above clusters, in drafting an integrative statutory framework it would be useful to structure in clusters that sets out means to effect participation, capacity building and scientific, technical as well as technological development. In light of the precautionary approach, this would be very useful, as Chapter Three has shown, how science in relation to biodiversity is still very dynamic, thus the law should perhaps consider providing mandate to frame actions instead of spelling out actions to be taken.

4.1.4 The Johannesburg Plan of Implementation 2002

The Johannesburg Plan of Implementation 2002 ("JPOI"), is a result of the World Summit on Sustainable Development ("WSSD") that was held in Johannesburg, South Africa to examine the progress made on the outcomes of the Earth Summit of 1992[21]. It sets out specific timetables to address key issues that were identified, including halving the number of people without access to drinking water by 2015 (through the development of integrated water resources management and water efficiency plans by

[21] The Johannesburg Plan of Implementation can be accessed at this website: http://www.un.org/esa/sustdev/documents/WSSD_POI_PD/English/POIToc.htm. Last accessed 24 January 2010.

2005)[22]; reducing the rate of loss of biodiversity by 2010; maintain or restore fish stock to levels that produce maximum sustainable yield not later than 2015[23]; halve the proportion of people who suffer from hunger[24]. It has made specific provisions[25] for consideration in relation to biodiversity, to help reduce the rate of biodiversity loss, which include:

a. Encouraging effective synergies between multilateral environmental agreements, through the development of joint plans and programmes, with due regard to common responsibilities and concerns;
b. Ensuring follow-up of CBD work programmes and decisions including those related to sustainable development and poverty eradication and those that promote community based sustainable use of biodiversity;
c. Promoting the ecosystem approach;
d. Ensuring effective conservation and sustainable use of biodiversity, by promoting and supporting initiatives for hot spot areas and other areas essential for biodiversity and promote the development of national and regional ecological networks and corridors;
e. Recognizing the rights of local and indigenous communities who are holders of traditional knowledge, innovations and practices, and, with the approval and involvement of the holders of such knowledge, innovations and practices, develop and implement benefit-sharing mechanisms on mutually agreed terms for the use of such knowledge, innovations and practices.

[22] *Ibid*. Chapter IV
[23] *Ibid*
[24] *Ibid*
[25] *Ibid*, Paragraph 44, Chapter IV, as modified.

Strategies were also put in place for country consideration in relation to forests[26], focusing on sustainable forest management of both natural and planted forests and for timber and non-timber products, as an essential mean to achieving sustainable development; eradicate poverty; significantly reduce deforestation; halt the loss of forest biodiversity and land and resource degradation; improve food security; improve access to safe drinking water, and affordable energy. The above strategies that aid reduction of biodiversity loss, focuses on creating and fostering synergistic links between different MEAs, consolidating multiple programmes and plans, so as to ensure integration. This is key to structure a statutory framework that provides a legal mandate to determine an overall purpose or objective to be achieved, consolidate actions, channeling them to an integrative framework, so that efforts are intensified in a centralized and collective manner. What is also important to note here is the need to link traditional or local knowledge or practices together with scientific knowledge and practices. This would require consideration for the setting up mechanisms that will acknowledge, recognize and give credence to traditional and local knowledge and practices.

In addition, it is important to balance both present needs with the needs of future generations. The idea is a statutory provision will have to enable the adoption of a measure that will determine the available capacity (of the resource to provide), assess and evaluate the potential future need and most importantly the mandate for a particular authority or entity to establish a mechanism suited for the different aspects of biodiversity conservation, i.e. specific for species type, specific to outcomes intended and specific lo location or scale or time frame, taking into consideration that science may not be 'present'.

[26] *Ibid*, paragraph 45, Chapter IV.

4.2. KEY ASPECTS FROM MULTILATERAL ENVIRONMENTAL AGREEMENTS

As far as multilateral environmental agreements (MEAs) are concerned there are at least five instruments that have bearing on this research, by virtue of Malaysia being signatories to the MEAs, in detailing the prerequisites in identifying the elements necessary for biodiversity conservation. They are:

i. Convention on Wetlands of International Importance especially as Waterfowl Habitat 1971 (RAMSAR)[27];

ii. World Heritage Convention 1972 (WHC)[28];

iii. Convention on International Trade in Endangered Species of Wild Fauna and Flora 1973 (CITES)[29];

iv. United Nations Convention on the Law of the Sea 1982 (UNCLOS)[30]; and

v. Convention on Biological Diversity 1992 (CBD)[31];

There are a series of other agreements at regional and bi-lateral levels that make provisions for biodiversity conservation but are not dealt with here. It is also important to note that efforts are underway to harmonise the different MEAs, particularly between CBD, RAMSAR, WHC, ITPGRFA and CITES[32].

Each of the MEA briefly discussed[33] focuses on the objective as well as key aspects to be considered, so as to help identify the key factors essential in framing an integrative statutory framework. It also takes into account the need to balance both human and

[27] See www.ramsar.org. Last accessed 24 January 2010
[28] See www.whc.unesco.org. Last accessed 24 January 2010
[29] See www.cites.org. Last accessed 24 January 2010.
[30] See http://www.un.org/Depts/los/convention_agreements/texts/unclos/closindx.htm. Last accessed 24 January 2010.
[31] See www.cbd.int. Last accessed 24 January 2010
[32] See preparatory document for the CBD Tenth Conference of Parties 2010, UNEP/CBD/SP/PREP/2 issued 30 November 2009. The overlaps and need for synergy was also noted in Díaz, C.L., 1992. Legislative complementarity and harmonisation of biodiversity-related multilateral environmental agreements. Report prepared for UNEP/UNDP/GEF Biodiversity Planning Support Programme (BPSP). FIELD, LONDON. 47 pages.

[33] Inputs in this table were primarily sourced from host websites of each convention as noted in *fns* 85-92 above, certain parts of the text were lifted verbatim from convention texts or explanatory notes therein the web sites accessed. Last accessed 24 January 2010.

environmental needs, focusing on how to identify elements that will ensure that human development i.e. economic development is not stymied by conservation, and conservation should be seen a means to ensure sustainable development and maintenance of ecosystems integrity or at least facilitate the adaptive capacity of ecosystems and biodiversity to adapt to change, and stay resilient to impact.

4.2.1. Convention on Wetlands of International Importance especially as Waterfowl Habitat 1971 (RAMSAR)

The RAMSAR Convention makes available a framework for national action and international cooperation for the conservation and wise use of wetlands and their resources. Wetlands here are identified as areas of marsh, fen, peatland or water, whether natural or artificial, permanent or temporary, with water that is static or flowing, fresh, brackish or salt, including areas of marine water the depth of which at low tide does not exceed six metres[34]. RAMSAR recognises[35] the interdependence of man and his environment, acknowledging the fundamental ecological function wetlands serve as regulators of water regimes and as habitats that support characteristic flora and fauna, especially waterfowl. Here waterfowl are regarded as international resources due to their migratory nature, thus require protection.

Parties to RAMSAR have an obligation to designate a wetland that will be included in a List of Wetlands of International Importance[36], and each wetland is to be described and delimited on a map, and inclusion does not exclude a Party's sovereign rights, which includes the right to include or delete or restrict subject to national interest.

[34] Article 1
[35] Preambular statements.
[36] See Article 2. Article 4(2) adds that parties can delete or restrict boundaries based on urgent national interest, of a wetland included in the List, but should as far as possible compensate for any loss of wetland resources, and in particular it should create additional nature reserves for waterfowl and for the protection, either in the same area or elsewhere, of an adequate portion of the original habitat.

Parties however will have to observe their international responsibilities when registering or changing their entries on the List. Parties also have the responsibility to formulate an implement plans that promote the conservation of the wetlands included in the List, and as far as possible the wise use of wetlands in their territory[37], this includes, the establishment of nature reserves on wetlands[38]. Research and exchange of data has also been given priority, in addition to ensuring via management measures, the increase of waterfowl population, as well as training personnel in fields of wetlands research, management and wardening[39].

Implementation of commitments are guided by a RAMSAR Strategic Plan 2009-2015, adopted via Resolution X.1[40], which serves to guide Parties and the Conference of Parties to RAMSAR, taking into account the acknowledgement that one of the "greatest obstacles to improving the implementation of the Convention and achieving its mission is the fact that the people who are knowledgeable about wetlands and the Ramsar Convention and dedicated to the wise use of wetlands are not always in a position to ensure that national commitments will be carried out"[41]. The Strategic Plan also notes that designated Ramsar authorities in national governments need to "redouble their efforts to ensure that personnel in other sectors of government are made aware of the national commitments to wetland conservation and wise use and the rationales for them, as well as strengthen partnerships[42].

The Strategic Plan outlines the underlying problem of economic development and consequent land-use change remaining as a higher priority as opposed to ecosystem

[37] Article 3.
[38] Article 4.
[39] Article 4.
[40] Accessed at http://www.ramsar.org/pdf/key_strat_plan_2009_e.pdf (last accessed on 24 January 2010)
[41] *Ibid*, page 2.
[42] *Ibid*, page 2.

maintenance, despite the fact that these are closely interlinked and that continuing to destroy ecosystems and their services is essentially "biting the hand that feeds us"[43]. Several key issues that are driving continued change, deterioration and loss of wetlands and their services identified include inadequate availability of water to wetlands, in relation to wetlands' key roles in the global hydrological cycle; increasing demands for water abstraction, particularly for irrigated agriculture; impacts of a changing and increasingly extreme and unpredictable climate; and poor understanding of the value of wetlands and their services (wetland valuation) to underpin sound decision-making and trade-offs[44].

The need for the Ramsar Convention to work closely with the Convention on Biological Diversity (CBD) through a joint work plan and act as the CBD's lead implementation partner for wetlands was also highlighted, particularly at national levels[45]. It is proposed also in the Strategic Plan by 2015 that a Ramsar *Framework for Wetland Inventory* with comprehensive national wetland inventories, including information on wetland importance, potential Ramsar sites, wetlands for restoration, location of under- represented wetland types, and the ecosystem services provided by wetlands.

Based on the above, there is a fundamental need to have a mandate to determine what should be designated, delineated and managed as a RAMSAR Wetland, including establishing processes and procedures that will give effect to a management and implementation plan. Based on the 2008 National Report[46] submitted by Malaysia,

[43] *Ibid*, page 3 at paragraph 16.
[44] *Ibid*, para 17.
[45] *Ibid,* page 4.
[46] Malaysia's NATIONAL REPORT ON THE IMPLEMENTATION OF THE RAMSAR CONVENTION ON WETLANDS. National Reports to be submitted to the 10th Meeting of the Conference of the Contracting Parties, Republic of Korea, 28 October – 4 November 2008. Accessed at http://www.ramsar.org/pdf/cop10/cop10_nr_malaysia.pdf

Malaysia as at 2008 designated five RAMSAR sites, but in the report, constraints and challenges faced by Malaysia included the need to bolster scientific data, fostering relationships between different agencies that have jurisdiction over various aspects related to wetlands[47]. At present Malaysia has no specific law in relation to the implementation of RAMSAR commitments, but there is a National Wetlands Policy (see Chapter 5).

4.2.2. World Heritage Convention 1972 (WHC)[48]

The World Heritage Convention is sets out legal provisions that establishes a duty on Party states to ensure that the identification, protection, conservation, presentation and transmission to future generations of the cultural and natural heritage referred to in Articles 1 and 2 and situated on its territory, and which belongs primarily to that State are carried out. It defines cultural and natural heritage in Articles 1 and 2 respectively. Natural heritage is defines as:

- natural features consisting of physical and biological formations or groups of such formations, which are of outstanding universal value from the aesthetic or scientific point of view;
- geological and physiographical formations and precisely delineated areas which constitute the habitat of threatened species of animals and plants of outstanding universal value from the point of view of science or conservation;
- natural sites or precisely delineated natural areas of outstanding universal value from the point of view of science, conservation or natural beauty.

[47] *Ibid.* Section 2 of the report, particularly inputs in parts C and E, at pages 8 to 9.
[48] Accessed at http://whc.unesco.org/archive/convention-en.pdf. Last accessed on 24 January 2010.

Each Party member has a duty to ensure the identification, protection, conservation, presentation and transmission to future generations of the cultural and natural heritage referred to in Articles 1 and 2 and situated on its territory, belongs primarily to that State[49]. It will do all it can to this end, to the utmost of its own resources and, where appropriate, with any international assistance and co-operation, in particular, financial, artistic, scientific and technical, which it may be able to obtain.

Once an area has been designated, Parties have to ensure that effective and active measures are taken for the protection, conservation and presentation of the cultural and natural heritage situated on its territory by adopting a general policy which aims to give the cultural and natural heritage a function in the life of the community and to integrate the protection of that heritage into comprehensive planning programmes; set up services for the protection, conservation and presentation of the cultural and natural heritage with an appropriate staff and possessing the means to discharge their functions; develop scientific and technical studies and research and to work out such operating methods as will make the State capable of counteracting the dangers that threaten its cultural or natural heritage; take appropriate legal, scientific, technical, administrative and financial measures necessary for the identification, protection, conservation, presentation and rehabilitation of this heritage; and foster the establishment or development of national or regional centres for training in the protection, conservation and presentation of the cultural and natural heritage and to encourage scientific research in this field[50].

At present two areas, Gunung Mulu National Park and Gunung Kinabalu Park have been designated as world heritage sites. There is no specific national legislation that

[49] *Ibid,* Article 4.
[50] *Ibid*, Article 5.

translates the commitments under WHC specifically, though there are specific legislations that can be linked with aspects related to parks or heritage (see Chapter 6). Key aspects to be taken into consideration is, the statutory requirement for mandates to be set in relation to identification, protection, conservation, presentation and transmission to future generations of the cultural and natural heritage, particularly provisions for measures in the protection, conservation and presentation of the cultural and natural heritage. Again the emphasis here is process and procedural in nature, with the focus on mechanisms and system to facilitate action that will prioritise heritage protection, conservation and presentation, not the subject of heritage per se.

4.2.3. Convention on International Trade in Endangered Species of Wild Fauna and Flora 1973 (CITES)

CITES[51] addresses aspects related to the international trade in specimens of selected species to controls and regulation through import, export, re-export and introduction from the sea, through a licensing and permit and certification system, and violation of the same will result in penalties. Endangered species as listed in Appendices I, II and III, and species here means any species, subspecies, or geographically separate population thereof, with Appendix I listing species threatened with extinction, whereby trade in specimens of these species is permitted only in exceptional circumstances; Appendix II listing species not necessarily threatened with extinction, but in which trade must be controlled in order to avoid utilization incompatible with their survival; Appendix III contains species that are protected in at least one country, which has asked other CITES Parties for assistance in controlling the trade.

[51] Information accessed at http://www.cites.org/eng/disc/how.php, last access 24 January 2010.

Specimens here means any animal or plant whether alive or dead; for species in Appendix I and II, for animal, any readily recognisable part or derivative thereof, and for those in Appendix III; as for plants for species in Appendix I, any readily recognizable part or derivative thereof; species in Appendices II and III, any readily recognizable part or derivative thereof specified in Appendices II and III in relation to the species. This is critical as it provides context for what needs to be controlled, and through proper categorisation measures can be structured specific to actions required to control, regulate or penalise. Malaysia has enacted a specific statutory provision that translates commitments under CITES through its International Trade in Endangered Species Act 2010 (see Chapter 6).

4.2.4. United Nations Convention on the Law of the Sea 1982 (UNCLOS)[52]

The essence of UNCLOS lies in its hope for a more stable order, promoting greater use and better management of ocean resources and generating harmony and goodwill among States that would no longer have to eye each other suspiciously over conflicting claims[53]. It was intended to cover navigational rights, territorial sea limits, economic jurisdiction, legal status of resources on the seabed beyond the limits of national jurisdiction, passage of ships through narrow straits, conservation and management of living marine resources, protection of the marine environment, a marine research regime and, a more unique feature, a binding procedure for settlement of disputes between States, basically regulating all aspects of the resources of the sea and uses of the ocean, and thus bring a stable order to mankind's very source of life[54].

[52] Convention text accessed at http://www.un.org/Depts/los/convention_agreements/texts/unclos/closindx.htm. Last accessed 24 January 2010.
[53] Excerpt from the historical background on UNCLOS, prepared by the Division of Ocean Affairs and Laws of the Sea, United Nations, via web access at http://www.un.org/Depts/los/convention_agreements/convention_historical_perspective.htm. Last accessed 24 January 2010.
[54] *Ibid*

Specific legal regime related to conservation in the EEZ under UNCLOS can be found in Part IV of the convention, specifically:

- Article 61. Conservation of the living resources
- Article 62. Utilization of the living resources
- Article 63. Stocks occurring within the exclusive economic zones of two or more coastal States or both within the exclusive economic zone and in an area beyond and adjacent to it
- Article 64. Highly migratory species
- Article 65. Marine mammals
- Article 66. Anadromous stocks
- Article 67. Catadromous species
- Article 68. Sedentary species

Conservation and management of the living resources of the high seas at Part VII in relation to high seas, specifically:

- Article 116. Right to fish on the high seas
- Article 117. Duty of States to adopt with respect to their nationals measures for the conservation of the living resources of the high seas
- Article 118. Cooperation of States in the conservation and management of living resources
- Article 119. Conservation of the living resources of the high seas
- Article 120. Marine mammals

As for the protection and preservation of marine environment, part XII sets out the detailed provisions for areas and aspects to be addressed in addition to measures to be adopted. Part XIII focuses on marine research and technology (development and transfer of technology), which makes provision amongst others for the actual conduct

and promotion of research. At present Malaysia does not have a specific overarching statute that governs all aspect related to commitments under UNCLOS, but there are several statutes that can be linked to the various sections under UNCLOS (see Chapter Six).

4.2.5. Convention on Biological Diversity 1992 (CBD)[55]

The CBD provides a binding legal framework for the conservation of biological diversity as "a common concern of humankind" and as an integral part of the development process; encompassing all ecosystems, species, and genetic resources; linking indigenous and traditional conservation practice to present day hi-tech measures, bringing forward traditional efforts of conservation for economic goals to the use of biological resources sustainably.

It sets out principles for the fair and equitable sharing of the benefits arising from the use of genetic resources, particularly resources marked for commercial use; makes provisions for matters related to biotechnology, technology development and transfer, access and benefit-sharing, protection of indigenous knowledge and practice as well as biosafety[56]. The CBD maintains the principle of sovereign right of States; in as far as they do not harm resources in neighbouring states[57]. Three main objectives ground the CBD, i.e. the conservation of biological diversity; sustainable use of the components of biological diversity; and fair and equitable sharing of the benefits arising out of the utilization of genetic resources[58].

[55] Convention text accessed at http://www.cbd.int/doc/legal/cbd-en.pdf (last accessed 24 January 2010).
[56] *Ibid.* See Preamble at pages 1-2; and Article 1.
[57] *Ibid,* Articles 3 and 4.
[58] *Ibid*, Article 1.

The CBD stretches over 14 areas of concern, 12 of which have great bearing on the framing of an overarching statutory framework, namely:

i. General measures for conservation and sustainable use[59], that addresses the need to develop national strategies, plans or programmes for the conservation and sustainable use of biological diversity, and integrate conservation and sustainable use of biological diversity into relevant sectoral or cross-sectoral plans, programmes and policies;

ii. Identification and monitoring[60] of biological diversity important for its conservation and sustainable use, including identifying processes and categories of activities which have or are likely to have significant adverse impacts;

iii. *In-situ* conservation[61], where Parties are to establish a system of protected areas or areas where special measures need to be taken to conserve biological diversity; develop, where necessary, guidelines for the selection, establishment and management; regulate or manage biological resources important for the conservation of biological diversity whether within or outside protected areas, with a view to ensuring their conservation and sustainable use; promote the protection of ecosystems, natural habitats and the maintenance of viable populations of species in natural surroundings; promote environmentally sound and sustainable development in areas adjacent to protected areas; rehabilitate and restore degraded ecosystems and promote the recovery of threatened species; establish or maintain means to regulate, manage or control the risks associated with the use and release of living modified organisms resulting from biotechnology which are likely to have adverse environmental impacts and

[59] *Ibid,* Article 6.
[60] *Ibid,* Article 7.
[61] *Ibid*, Article 8.

risks to human health; prevent the introduction of, control or eradicate those alien species which threaten ecosystems, habitats or species; ensure compatibility between present uses and the conservation of biological diversity and the sustainable use of its components; respect, preserve and maintain knowledge, innovations and practices of indigenous and local communities embodying traditional lifestyles relevant for the conservation and sustainable use of biological diversity and encourage the equitable sharing of the benefits arising from the utilization of such knowledge, innovations and practices; protect threatened species and populations; on determination of significant adverse effect on biological diversity regulate or manage the relevant processes and categories of activities.

iv. *Ex-situ* conservation[62], where Parties are to adopt measures for the ex-situ conservation of components of biological diversity, preferably in the country of origin of such components; establish and maintain facilities for ex-situ conservation of and research on plants, animals and micro- organisms, preferably in the country of origin of genetic resources; adopt measures for the recovery and rehabilitation of threatened species and for their reintroduction into their natural habitats under appropriate conditions; and regulate and manage collection of biological resources from natural habitats for ex-situ conservation purposes so as not to threaten ecosystems and in-situ populations of species, except where special temporary ex-situ measures are required;

v. Sustainable use of components of biodiversity[63] which include integration of conservation and sustainable use of biological resources into national decision-making; adoption of measures relating to the use of biological resources to avoid or minimize adverse impacts on biological diversity; protection and

[62] *Ibid,* Article 9.
[63] *Ibid*, Article 10.

encouragement of customary use of biological resources in accordance with traditional cultural practices that are compatible with conservation or sustainable use requirements; supporting local populations to develop and implement remedial action in degraded areas where biological diversity has been reduced; and encouraging cooperation between its governmental authorities and its private sector in developing methods for sustainable use of biological resources

vi. Incentive measures[64] with the adoption of economically and socially sound measures that act as incentives for the conservation and sustainable use;

vii. Research and training [65]which include establishing and maintaining programmes for scientific and technical education and training; and promote and encourage research;

viii. Public education and awareness[66] to promote and encourage understanding of the importance of, and the measures required for, the conservation of biological diversity;

ix. Impact assessment and minimising adverse impacts[67] amongst others introduce appropriate procedures requiring environmental impact assessment;

x. Access to genetic resources[68], whereby conditions are created to facilitate access to genetic resources for environmentally sound uses, on mutually agreed terms, and subject to prior informed consent in addition to ensuring that scientific research based on genetic resources should involve Parties;

xi. Access to and transfer of technology[69], which includes biotechnology in as far as it doesn't cause significant damage to the environment, and provided or

[64] *Ibid*, Article 11.
[65] *Ibid,* Article 12.
[66] *Ibid*, Article 13.
[67] *Ibid,* Article 14.
[68] *Ibid,* Article 15.
[69] *Ibid*, Article 16.

facilitates under fair and most favourable terms, taking in consideration matters related to intellectual property rights;

xii. Handling of biotechnology and distribution of its benefits[70], whereby legislative, administrative or policy measures will be taken to provide participation in biotechnological research; promote and advance priority access on a fair and equitable basis, and Parties are to consider the need for and modalities of a protocol for the safe transfer, handling or use of any living modified organisms that may have adverse effect of the conservation and sustainable use of biodiversity, including information on use and safety regulation in handling such organisms.

The 12 commitments highlighted indicate that emphasis is on the practice and procedures that will have to be mandated and regulated, not the actual resource, perhaps, taking cue form what was noted by E.O Wilson[71], that the true number ad types of species have not been fully discovered. Factors that require consideration here focuses on the 'how', 'how to' and 'what to', though the CBD was carefully to couch options for action within the administrative or legislative ambit.

However the leaning, given the references to measures and protocols would lean towards structuring a regimented regulatory approach, particularly in relation to conservation, sustainable use, *in situ* as well as *ex situ* conservation, handling of biotechnology and access to genetic resources. Key words that have been flagged from all the MEAs discussed above will be listed in part 4.4 below.

[70] *Ibid*, Article 19.
[71] Wilson, E.O., The current state of biological diversity. In *Biodiversity*, E.O Wilson and F.M. Peter (eds), 3-18. Washington, D.C.: National Academy Press, 1988. See pages 5-7.

4.3. Initiatives in the ASEAN Region

In 1985, six nations[72] under the ASEAN[73]; came together and promulgated an agreement on the conservation of nature and natural resources (Agreement on Conservation and Natural Resources 1985), which commits parties to adopt measures and conservation strategies that are necessary to maintain essential ecological process and life-support systems, to preserve genetic diversity, and to ensure the sustainable utilization of harvested natural resources under their jurisdiction in accordance with scientific principles and with a view to attaining the goal of sustainable development, and develop national conservation strategies[74], and shall co-ordinate such strategies within the framework of a conservation strategy for the Region[75].

It was noted that this was a novelty then, as it was the precursor to the CBD, and made references to the sustainable use of resources, sustainable development and ecological processes[76]. It stretches six chapters, structuring commitments to conserve and develop with the goal of attaining sustainable development, taking into account development planning; conserve species, ecosystems and genetic diversity, including its sustainable use, conserve vegetation and forest resources, soil, air and water; conserve ecological processes; adopt environmental planning measures with measures to address trans-frontier environmental impacts. The Agreement did not come into force, as it did not receive the number of ratification required[77], but it does stand as a model worthy of consideration if not copy.

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[72] Brunei, Indonesia, Malaysia, Philippines, Singapore and Thailand

[73] ASEAN stands for the Association of Southeast Asian Nations, which was established on 8 August 1967 in with the execution of the ASEAN Declaration (Bangkok Declaration) by Indonesia, Malaysia, Philippines, Singapore and Thailand. It now has ten member countries, with the inclusion of Brunei Darussalam (1984), Viet Nam (1995), Lao PDR (1997), Myanmar (1997) and Cambodia (1999). Its primamry purpose is collectively come together to accelerate economic growth, social progress and cultural development, and strengthen the foundation for a prosperous and peaceful community of Southeast Asian Nations. Information sourced from http://www.aseansec.org/64.htm, last accessed 1 January 2012.

[74] ASEAN Agreement on the Conservation of Nature and Natural Resources 1985. Article 1.

[75] *Ibid,* Article 2.

[76] Phillipe Sands, 2003. Principles of Environmental Law (Second Edition). Cambridge University Press. 1116 pages. See pages 540-2, particularly page 541.

[77] The reasons for ratification not coming to fruition has not been clearly determined, as noted in Kheng Lian Koh, 2003. ASEAN Agreement on the Conservation of Nature and Natural Resources, 1985: A Study in Environmental Governance. Manuscript

In the 2009 Roadmap for an ASEAN Community 2009-2015[78] strategies were put in place to help the ASEAN community work towards achieving sustainable development as well as promoting clean and green environment by protecting the natural resource base for economic and social development including the sustainable management and conservation of soil, water, mineral, energy, biodiversity, forest, coastal and marine resources as well as the improvement in water and air quality for the ASEAN region[79].

Specific strategies for biodiversity is provided for, as listed below:

- Strategy 38: Ensure ASEAN's rich biological diversity is conserved and sustainably managed toward enhancing social, economic and environmental well-being. This strategy proposes actions that include implementation of programmes of work; collaboration in respect of access and equitable sharing of genetic and biological resources; listing and management of ASEAN Heritage Parks[80] as an effective platform for ecosystem based protected areas amanagement; cooperation for transboundary protected areas; minimization of impact of transboundary movements of living modified organisms; promote capacity building; promote the involvement of local community; reduce impacts of invasive alien species; strengthen efforts to control transboundary trade in wild fauna and flora through the ASEAN Action Plan on Trade in Wild Fauna and Flora 2005-2010 and the ASEAN Wildlife Enforcement Network (ASEAN-WEN) to implement commitments to Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES); and conduct

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accessed at http://www.earthlore.ca/clients/WPC/English/grfx/sessions/PDFs/session_3/Koh.pdf. Last accessed 1 January 2012.
[78] Accessed at http://www.aseansec.org/publications/RoadmapASEANCommunity.pdf. Last accessed on 1 January 2012.
[79] *Ibid*, at pages 80-87.
[80] As of 18 October 2011, 30 parks have been listed at the 13th Informal Asean Ministerial Meeting on the Environment at Phnom Penh, and a series of criteria as well as guidelines for listing were also agreed at the said meeting. See http://www.news.gov.sg/public/sgpc/en/media_releases/agencies/nparks/press_release/P-20111019-1/AttachmentPar/00/file/Factsheet-%20Asean%20Heritage%20Parks.pdf Last accessed 19 January 2013.

joint survey and monitoring of migratory wildlife; and

- Strategy 37: Ensure ASEAN's coastal and marine environments are sustainably managed; representative ecosystems, pristine areas and species are protected; economic activities are sustainably managed; and public awareness of the coastal and marine environment instilled.

The above strategies reflect pretty much what is contained in existing MEAs, designed to gather nations towards a regional collective when complying with national commitments to the separate MEAs. The ASEAN Secretariat does not provide a report as to the status of implementation of the strategy, to enable determination the actual translation into action by the nation parties to ASEAN. The factors raised, echo the factors identified in the discussion of the MEAs in 4.3.

4.4. POINTS FOR CONSIDERATION

If principles were taken as being the underlying rational for which a legal basis to conserve biodiversity is framed upon then there are at least seven key principles that should be taken into consideration, to ensure that the purpose and rationale for such a legislative instrument facilitates the convergence of multiples actions matched with concerted goals. The key principles are:

- Intergenerational equity in that the right to development must be fulfilled so as to equitably meet developmental and environmental needs of present and future generations;
- Carrying capacity and ecological thresholds particularly the capacity of the Earth to produce vital renewable resources must be maintained and, wherever practicable, restored or improved;

- Inclusivity and participation, that is stakeholder participation, at all levels, scale and by all concerned citizens, shall be made the norm, at all points of 'intervention' in biodiversity conservation, complemented by appropriate access to information pertaining to biodiversity conservation that affects or will impact on such stakeholders, and at the very least opportunities should be created to include participation in decision making processes;
- Integrated approaches and coordinated measures and efforts shall be made the norm to link different authorities and stakeholders and ensure that common objectives are met and development is compatible with the need to protect and improve environment for the benefit of their population;
- The precautionary approach shall be widely applied where there are threats of serious or irreversible damage; lack of full scientific certainty shall not be used as a reason for postponing cost-effective measures to prevent destruction, degradation and loss.
- Accountability of action shall be made clearer through a series of penalties for non-compliance or violation of legal provisions.
- Traditional and indigenous knowledge and practices should be taken into consideration in conservation and their knowledge and practices must be adequately protected.

As for the selected conventions summarily discussed in part 4.2, there seems to be a trend from the 1970's to date, whereby there has been a shift from general protection specific to species and habitats to one that looks at maintaining ecological integrity, through the protection and 'regeneration or repopulation' of species, which has been primarily driven by scientific understanding and information. Now also, the approach towards protecting biodiversity has transcended traditional sovereign boundaries,

particularly so, now that biodiversity conservation has been a identified as a key component to help us adapt against the onslaught of climate change[81].

Fundamental elements for consideration in framing an integrative statutory framework, from the discussion on MEAs, would include mandates to effect:

- Measures to set scope and remit of control;
- Measures to enable identification, categorisation, classification, delineation or areas and all matters related to determining the subject matter at hand, be it species or ecosystems or genetic resources;
- Measures to establish lists;
- Measures to enable monitoring, review, evaluation, assessment and review or state, conditions, threats and impacts;
- Measures to enable review of existing systems, mechanisms, processes or procedures, including techniques and application as well as practice;
- Measures to facilitate participation of stakeholders;
- Measures to ensure inclusion of all forms of knowledge; and
- Measures to protect rights and interests.

Based on the above-identified factors, the key words will be consolidated into a diagram in Chapter Six (see Diagram 6.1).

[81] See www.cbd.int. Last accessed 24 January 2010.