Fax. 9205603 / 9202211
Tel: 9202960

F.No. 2(9)/2001-Bio
GOVERNMENT OF PAKISTAN
Ministry of Environment, Local Government
& Rural Development

DEPUTY SECRETARY(LW)

Islamabad the 04 May, 2001

SUBJECT: GLOBAL STRATEGY FOR PLANT CONSERVATION.

Please refer to your reference No. STTM/dc/ia dated 22-1-2001 on the above subject and to enclose herewith copies of the comments received from various organization/agencies in Pakistan which might be helpful to CBD Secretariat for making recommendation regarding the development of global strategy for plant.

With regards,

Yours sincerely,

(Kalimullah Shirazi)

Mr. Hamdallah Zedan
Executive Secretary
World Trade Centre
393 St, Jacques Street, Office 300
Montreal Quebec, Canada

Subject: **COMMENTS ON GLOBAL STRATEGY FOR PLANT CONSERVATION**

Floral diversity is cyclic or evolutionary phenomenon spanning a few hours (e.g., an algal water lagoon) to 100 of years of flourishing period (e.g., a plant population of cycads, sequoia, or ficus sp.). Species distribution of a plant community occupying a particular geographic location is the result of its climatic (air temperature, humidity, precipitation, light, etc.), biotic (genetic variations, inter and intra-specific competition, predation, selective adaptability, etc.) and edaphic (soil temperature, organic matter, soil water content, soil physico-chemical characteristics) factors. The prevailing agro-climatic conditions and geographical location of Pakistan, however, is the main factor responsible for variability and spreading of its flora and fauna. Agro-climatic conditions of the country varied from snowy mountains to hot and dry deserts and from fertile semi arid Indus plain to highly saline seacoast. On the basis of the prevailing environmental and edaphic conditions the floral vegetation of the country could be divided into the following agro-climatic zones:

1) *High wet mountains*: This agro climatic zone lies from 1200 to 3000 m above sea surface. Soils of the slide slopes of the mountains are residual and colluvial. Texturally these are moderately coarse to medium and pH ranges from 5.6 to 7.8. Organic matter content of these soils is >1%. The soils along the streams are deep, medium textured, homogenised having a pH 7.8 to 8.4. Conifer plants dominate the floral population of this zone. Aside from forest conifer plants an enrich culture of ferns, lichens, fungi and other small vegetal herbs can also be observed during snow-melting periods. The region is enriched pool of seasonal and perennial plants of highly timber, medicinal and

8) *Dry-western plateau*: The summer season is mild while the winter is cold. Temperature maximums (daily) are 40-45 °C in the north and 33-34 °C along the coastal area. Minimum temperature ranges from 8-44 °C for north and 3-6 °C for the coast. Precipitation (monthly) varies from 30-35 mm in winter and 2-4 mm in summer. Altitude of this zone is from 150 to 600 m. Soils of the mountain slopes are bare, shallow, very gravely, moderately coarse textured to stony and gravely while that of the plains are moderately deep to deep silty to clayey.

9) *Fresh water ponds*: These stagnant water reservoirs are spreading throughout the country. Some seasonal ponds are short lived and appear only in the rainy season while the others receiving drainage wastewater of the urban and rural areas as well as the industries persists for the years. During flooding season, water hyacinths, and blue green and green algal flora dominate but as the water dries the other plant communities occupy the sites.

Because of its crucial role in environmental prevention and its food, fibre, medicinal and economic value in our daily life, sustenance and maintenance of the floral diversity of a particular area in specific and the world in general is always remained a matter of prime importance. Since a large number of factors affect the distribution and spreading of the plant species, the floral diversity of a region is highly fragile in nature. *It has been anticipated that at the beginning of 21st centaury more than 15% of the estimated 4 to 5 million species of plants, animals, and microorganisms on earth will be extinct, primarily due to the anthropogenic destruction (overexploitation, deforestation, etc.), many of them without having been discovered or considered in terms of their usefulness to the human beings.* An

estimate indicates that among the total known plant populations only 2% are being used for food. Thus to meet the requirements of the rapidly exploiting population there is a need to explore the more plant species of medicinal and food value. This would only be possible if we have demographic knowledge and floral record of the plant species of our cultivated and forest areas.

The situation in Pakistan regarding the collection and maintenance of the floral record and conservation of the plant species is highly disappointing. A well-organized or systematic approach yet has not been made even to address the issue. Although, in the past, some sporadic individual attempts were made to collect the floral information of a particular locality or of a specific plant/plants population (e.g., Flora of West Pakistan by S. Kitmora, 1958, Flora of Government House, Lahore, by M.I. Shaikh, 1967, The vascular plants of West Pakistan and Kashmir by Alec Stewart and Flora of West Pakistan by E. Nasir, S.I. Ali and A. Stewart, 1972) but after passing many years, neither the records have been consolidated nor the data has been upgraded. Lack of a responsible authority would probably be one of the main reasons for this anomaly. Aside from these floral records, no other systematic or sporadic approach either individual or on government level has been made for collection of the floral data of the country and preservation of the specimens of the representative plant species, especially the diversity of the plants growing under specific agro-climatic or ecological coditions. No doubt the floral herbaria established for plant preservation at Gorden College, Rawalpindi and at the University of the Punjab, Lahore, are looking after some of the representative plant collections but a strategic and systematic approach to collect and preserve the representative plant species and the related demographic record even their own floral collection seems to be overlooked. Aside from taxonomic data no other scientific information are available for the plant

specimens. Moreover, the facilities to update and publicized the knowledge of the plants preserved in these herbaria are unavailable. Additionally, they did not have any collaboration with international herbaria and the floral organizations to share and update the information of their floral collection. Now, with the consciousness of the international community, there is a need that the floral record of the country will be organized and updated. Further the efforts to explore the economic and food potential of our plants and to preserve the rare and extinct plant species of our floral heritage should be accelerated. Thus we would be able to play our role in preserving the global plant heritage.

Following measures would be useful not only to integrate and update the demographic record of our own national herbaria but will also help the international community to devise a global strategy for conservation of plant biodiversity.

1) Increase in the number of floral herbaria of the country. A network of the departments of plant sciences of the educational universities and the forest institutes is already present in different agro-climatic zones of the country. These departments and the institutes would be made responsible for establishing a floral herbarium, which would maintain and look after the floral record of its own agro-climatic zone.
2) The existing and the new herbaria should be equipped with the advanced technology to preserve, maintain and upgrade the record of their floral collection. Aside from taxonomic record, the herbaria should also be liable to keep the demographic and historical record of each plant species and the community.
3) A floral monitoring cell comprising the eminent plant scientists from all over the country should be convened at federal level. The cell should be responsible

for monitoring and functioning of the national herbaria and their integration and coordination within the country with other research and educational institutes and outside the country with the international floristic organization, libraries, and the herbaria.

4) A mass scale campaign for awareness of the people for the importance of plant biodiversity and its significance in human life as well as floral data collection will be initiated in the country at the government and in public media. A weekly or monthly lecture arranged at school and college level and the inclusion of short questions related to the local plant population in the examination papers will be useful for dissemination of the information regarding the importance and significance of the plants among the people and to monitor the floral biodiversity of the plant community of a particular area.

5) Every year, one or more post-graduate students, studying in the department of the plant sciences of a university should be assigned a research project to collect and update the demographic record of the plant species of a specific zone. To evoke the research interest in this field, the students would be awarded scholarships from the relevant ministries. The step will not only accelerate the research activities in this research area but will also be helpful in upgrading the knowledge and the data record of the herbaria.

6) NGOs' should be constituted and encouraged for generating funds for looking after and monitoring of rare floral species or plant communities of general and specific public interest.

7) Legislation should be made and implemented to practice a specified cropping pattern applicable for a particular area and to control the deforestation of the uncultivated areas for agricultural purposes.

8) To avoid the extinction of traditional crop species, cultivation of the old crop plants along with new crop varieties should be promoted among the farmers.

9) To avoid the native environment change, use of agrochemical inputs in the cropping fields should be minimized or restricted. Traditional cropping patterns and the use of natural organic inputs in the field should be promoted and encouraged.

10) Legislation should be made for town planners and the builders to allocate a part of their constructions for flourishing of native plant population under natural representative habitat of the area.

GLOBAL STRATEGY FOR PLANT CONSERVATION

Dr. Raza Bhatti,
Dept. of Botany, Shah Abdul Latif University, Khairpur.

It's an established fact that the environmental crisis has been increasing globally at an alarming rate. The potential reason for it is mans' wrongdoing/mischief on earth, encountered with nature. The economic progress has become the prime objective for men now days. In order to achieve it, men exploit natural resources by un-natural means. As a result it contributes towards deforestation/degradation of environment. Consequently, it begets water, air pollution and soil erosion etc. This cyclic phenomenon has resulted in disturbing the ecological equilibrium on this planet. Even sea life has become a victim of it i.e. nuclear as well as industrial waste. Such nasty activities have created substantial amount of potential threat for the living beings on the earth.

First it is the man who must acknowledge himself responsible for degradation of life on earth and in the water as well. No doubt that the severity of the problem has been fully realised by considerable population especially in the developed world. However, a large population is still lacking such sense in the developing world. It is a demand of time that such realization must be spread at large, so that common people can take responsibility of maintaining friendly/compatible environment for all the creatures, not only for himself.

Metaphorically "Environmentally Friendly" can be described as the compatible environment for Bio-diversity. Plants are one of the essentials, which constitutes Bio-diversity. They provide wide range of habitat for animals, birds, insects' etc. Not only this, but all the required parameters (such as food, shelter, health & wealth related affairs) to live a life are being provided by plants. Aesthetic sense is also one of their benefits. (Acquiring aesthetic sensation, man is also beneficiary of plants and their associates i.e. animals, butterflies, birds and bees)

The EARTH is ours, the only living planet and the only "OKIOS" for all living organisms including human beings. The human existence is possible only through peaceful co-existence with other beings (plants, animals etc.) of the planet. It is vivid phenomenon that the termination of existence of others is a self-termination process committed by human beings by themselves. Hence, human being as a "NOMOS" should respect the law of nature.

> ***Doesn't mischief on earth, after it has been set in order: that will be best for you, if you have faith. [Quran; Surah Al-Araf (7): Ayah 85]***

> ***" And the earth we have spread out (like carpet0; set thereon mountains firm and immovable; and produced their in all kinds of things in due balance" [Quran]***

The forest is one, which adds major of the beings in our planet. Forests are home to most of the world's 50 million indigenous people. On large scale, forests act as 'CARBON SINKS', absorbing carbon dioxide, one of the green house gases behind global warming. When trees burn or rot, they release carbon dioxide into atmosphere, adding fuel to a warming phenomenon resulted in disastrous consequences for humankind/living beings. Many of us know that the forests regulate local temperature and rainfall and influence climate by a complicated interaction among ground (soil), water air and trees.

The sun (solar) and soil, both are potential key sources to make earth habitable for all kinds of life. It can be interpreted that solar energy is mainly driving force behind the green fields on earth. There is a strong relationship between sun and soil, their efficient organisation/execution is represented as plant Life (Vegetation). The vegetation is a superb manifestation of close relationship between soil and sun (Solar energy). No photosynthesis works without solar energy. Plants keep surviving in its own conventionality and providing essential requirement to other creatures, human being, animal, insects, birds and etc. It must be emphasized that solar energy is a sole source for

photosynthesis. This mechanism is undoubtedly regarded as a fundamental force, which pushes life to be emerged and be continued. (or responsible in keeping plant life on.). It is plants, which makes close association of human beings and other living organisms on the earth (interdependent). Exclusively, human beings are relying upon plants for their livelihood, whether it is for their well being, prosperity, food, house, and medicine even for controlling over other creatures. Therefore, if vegetation prosperous, all forms of life go well; if it disturbs, would be resulted in loosing equilibrium. It is human being who is entrusted with a responsibility to act as a custodian in keeping earth and environment pure for existing as well as future generation (today and tomorrows' generation) in association with all living beings on this planet.

According to John Perlin (author of Forest Journey) that the Babylonian ruler HAMMURABI about 4000 years ago instituted the death penalty for illegal tree cutting after wood shortages. It became so acute that the people were taking doors with them when they moved somewhere else. The record of history also makes clear that action often come too late. But the time Hammurabi took stern stance, deforestation had already destroyed vital agricultural watersheds and depriving Baylon of wood needed for chariots and ship.

So, history shows that societies pollute first and pay later in horrendous manner. Thus, the Gran Canaria Declaration calling for Global Programme for Plant Conservation must be acknowledged for taking a lead to disseminate awareness and polite pressures through Governmental and Non-Governmental Organisation to formulate laws and regulations for better plant conservation. It is hoped that it must bring into practices before we regret that it is too late.

Pakistan occupies some 803,940 sq. km, lies between 23°, 30' and 37°, 45' north and 61 and 75°,30' east longitude. Pakistan has 909 km of land borders worth Iran on south-west, 2430km with Afghanistan to the west and north, 523 km with China to the north-east and 24912km with India all down the east side and 1046 km of Arabain sea coasline in south. The northern border is with Afghanistan's Wakhan Corridor, a strip of

land in no more than 15 km wide, beyond which is Tajikistan. It's over 1800 km from Gawadar bay in southwest Baluchistan to the Khunjerab Pass on the China border.

Topographically, Pakistan has six major regions: northern mountains, northern plateau, western mountains, Baluchistan plateau, southeast desert and the Indus plain. Crossing through it all like a 2500km artery is the Indus river-rising in Tibet, flowing northwest and around the Nanga Parbat, dropping south out o the mountains to water a populous floodplain and emptying through an immense delta into Arabian sea. Less than a quarter of the land is arable.

Pakistan has a rich diversity of flora due its variety of ecological zone and habitats. Its native flora comprises of about 5000 flowering plants species, which is three times more than the flowering plants of British Isles (ca.1500). Ali & Qaisar (1986) reported about 372 species as an endemic one in Pakistan. British Isles has about 15 endemic species.

The census of plants species complied in the Flora of Pakistan estimates about 4000 species, belonging to 203 families. Of them, about 42% (1728) species belongs to only seven families; Poacaea 492, Paplionacaea 437, Brassicaceae 250, Lamiacaea 190, Boraginaceae 135, Ranunculaceae 114.

IUCN and WWF warned that as many as 60,000 plant species out of 250,000 species can become extinct by 2050, if present trend continues, whereas, in Pakistan, the broad leaf forest are disappearing at the rate of 10 sq. km/year.

The habitat destruction due to urbanization and agriculture purpose, over-exploitation of plants species for economic value ignoring its sustainability, unplanned and indiscriminately grazing behaviour can be considered as key factors responsible for threatened plant species in Pakistan.

So far, less work has been done in terms of proper recording of threaten plant species in Pakistan. A complete set of information on identification and distribution of species is lacking. Therefore, botanizing all parts of country needs to place on top priorities. This detailed study will serve as database for determining/depict the status of species such as rare, vulnerable, endangered or extinct one. It would assist in compiling RED DATA BOOK on threatened plants across the country. Not only this but it would widened the understanding and knowledge of scientists, environmentalist as well as nature lovers.

WHAT TO DO/HOW TO DO

In order to maintain **"CONSERVATION"** a systematic approach/regulations are imperative to be implemented as follows:

- Management;
- Legislation;
- Implementation.

All such moves needs thorough study before come into being. This study can address the magnitude of problem, its causes, solutions; suggestions regarding sustainability and post implementation impact for such strategies.

MANAGEMENT:

A permanent "Federal Commission on Conservation" should be established under Federal Government, assisted by Ministry of Environments, Environment Protection Agency, Forest department, Wild Life department with its offshoots "Provincial Commission for Conservation" in each province.

RESPONSIBLE FOR:

- To coordinate the Ministry of Environments, Environment Protection Agency, Forest department, Wild Life department etc (at Federal as well as in Province level), which are directly or indirectly looking after the affairs of plant life.
- Effective **LEGISLATION** should be designed for proper functioning of "Federal Commission on Conservation" (FCC) as well as "Provincial Commission on Conservation" (PCC).
- The rules/regulations may be formulated regarding protection of Bio-diversity, keeping in mind the basic needs of the communities inhabiting in the areas.
- The Wild Life Departments at province, divisions, districts should be given a status of **"IMPLEMENTATION AGENCY"** for enforcing the legislation related to Conservation.
- The **RED DATA** list/book should be prepared, indicting the status of threatened species.
- **CHECK LIST** of plant species for different regions should be complied.
- **PROPER SCIENTIFIC TRAINING PROGRAMMES** should be organised to get trained manpower for Conservation.
- **"CONSERVATION RESEARCH WING" (CRW)** should be established in various Universities, giving them a wide range of conservation based problem. A substantial grant may be made available for it.
    - **BOTANICAL GARDENS** should be established in different universities based on respective habitat around. These gardens would enable to launch *Ex situ* research progamme, focusing on "Endangered Species". Such species grow there under favoured condition, then, to be introduced in the wild.
    - **"REGIONAL HERBARIA"** should be established, providing them sufficient facilities, including skilled manpower, (Trained Taxonomists, Ecologist and Environmentalists). It also associated with the Universities.
- **"CONSERVATION DAY"** should be declared and observed right from primary School to Universities level. Talks & walks, debates be organised.
- **"COMMUNITY PARTICIPATION PLAN FOR PLANT CONSERVATION & BIODIVERSITY" (CPPPCB)** should be prepared. Among the villagers, the school

teachers, elderly persons, peshImams in rural areas may be selected and be trained in way that their sense of understanding towards conservation be developed and willing to take responsibility as volunteer one.

- **"ACTION PLAN FOR PROTECTED AREAS IN DIFFERENT HABITATS" (APPADH),** should be prepared.
  - **NATIONAL PARKS, NATURAL RESERVES, PROTECTED LANDSCAPE, and MANAGED NATURE RESERVES** should be established/declared: Taking into account habitat diversity, more national parks should be established. (such as Arid Natioanl Park, Thar Desert National Park, , Nara River Indus National Park: at various places such as, Kalabagh National Park, Chashma National Park, Taunsa National Park, Guddu National Park, Sukkur National Park and some other places)
- **CONSERVATION ETHICS:** (Awareness Campaigns & Participatory Approach)
- Educate the local population on conservation ethics. It should be initiated in a way that they understand the social context of the conservation, its contribution/values/role being acknowledged by local communities.
- Schoolteachers, PeshImamas be given few weeks training keeping in mind Islamic point of view (Quran & Haideth) regarding conservation.
- One FRIDAY may be declared after every four months across the country on which all Ulemas/Pesh-imamas express the significance of conservation in Islamic perspective (Islamic education) to congregation while offering Friday Prayers.
- Likewise, leaders of other religions (Christian, Hindu etc.) should also be involved for this purposes.
- Pampheltes/Literatures/Signboards in local languages may be made available at public places, schools, hospitals, railway station and Airports etc.
- **"NATIONAL COMMISSION FOR MEDICINAL PLANTS" (NCMP)** should be formed, comprising of Botanists (Taxonomists, Ecologist), Biochemists, Hakeems, Foresters, Herbal traders. NCMP be given responsibilities as follows:
  - To determine the medicinal uses of plant species;
  - To check the efficacy of plant species;

- To record various uses of same plant for different ailment by different communities in different parts of Pakistan;
- To build seed bank of medicinal plants;
- To carryout ethnobotanical study in different habitats/localities.

5.3.4. Summary and analysis: thematic contributions of WWF to plant conservation

- The Plants Conservation Unit of WWF International no longer exists. Its staff have been absorbed into WWF-UK. WWF-UK has expressed a willingness for the unit to continue to promote plant conservation internationally, though there must be some bias towards the specific interests of the WWF-UK International Programme.

- The strategy of the Plants Conservation Unit to concentrate on one particular theme (*People and Plants* – capacity building in applied ethnobotany) was correct. Concentration of effort is still seen as essential for the unit to have much chance within WWF of making a significant contribution to international plant conservation, given the complexity of the organisation. The particular theme chosen is still regarded as suitable for WWF, given its emphasis on field projects (especially protected areas and the involvement of local communities) and its potential institutional capacity to link experiences in field projects with wider international advocacy.

- Weaknesses of this concentrated approach have included a failure to gain adequate support from powerful sections of WWF, especially those holding funds. The emphasis in *People and Plants* has been collaboration with selected NOs and POs in developing countries, which carry relatively little influence over patterns of spending in the International Programme. (But, a failure to be represented on the committees within WWF responsible for developing its geographical programmes has been largely inevitable, given their large number.)

- It is unlikely that WWF will embrace plant conservation as a major theme equivalent to Forests or Ecoregions. WWF already has a plethora of cross-cutting priorities and programmes. However, a focus on plants will often be critical to WWF for the achievement of its targets.

- Nevertheless, plant conservation is central to WWF's Mission. There are numerous WWF projects and thematic programmes relevant to plant conservation. At present, these lack synergy. Experiences from them, and analyses of these experiences, are generally unavailable either to members of WWF working outside the particular projects or themes, or indeed to the wider international conservation community. WWF should play a role to stimulate plant conservation internationally. One way of achieving this would be to work in partnership with other concerned organisations.

6. RECOMMENDATIONS FOR FUTURE WORK ON PLANT CONSERVATION BY WWF

There is need for much greater concerted international effort to conserve plants, within the WWF network and more widely. Based on its own experiences and fields of focus, WWF is well placed to:

- promote new emphases in plant conservation which (relative to the traditional plant conservation paradigm) contain a wider vision of the value of plants, see *in situ* conservation as normally of prime importance, incorporate social systems integrally into analyses and recommendations for action, and integrate conservation and development;
- contribute to developing and playing its part in an international network for plant conservation, based on acceptance of new emphases in plant conservation (as above) and bringing new partners into the network based on their acknowledged fields of expertise. Members of the network should be actively involved in practical work, especially at field level, and be able and willing to extract lessons from these experiences to propose and promote related policies and best practices.

The new International Plants Conservation Unit of WWF-UK (successor to the Plants Conservation Unit of WWF International) should:

- take a leading role in developing the above network, within WWF and more widely;
- select applied ethnobobotany as one field for its own particular focus, through continuing its commitment to *People and Plants*. Within this theme, four topics should be selected for the development of recommendations for policies and best practices, as follows:
  - wood-carving and conservation;
  - conservation of high altitude Himalayan medicinal plants;
  - sustainable use of plant resources within protected areas;
  - curricula in applied ethnobotany.
- select additional fields for its own particular focus, in discussion with other members of WWF-UK and more widely. Likely candidates are aspects of the conservation of medicinal plants, a subject believed to be particularly appropriate to WWF, as well as generally of international conservation importance.

Practical implementation of the above recommendations by the International Plants Conservation Unit of WWF-UK requires that:

- funds and partners are secured for continuing work under *People and Plants*, and the work is then implemented;
- proposals are developed, funded and carried out, relating to the development of an international plant conservation network and specific work on chosen issues (such as aspects of the conservation of medicinal plants).

GLOBAL STRATEGY FOR PLANT CONSERVATION

It has been very rightly recognized in the "Gran Canaria Declarations" about the global responsibility of botanist / plant conservationist from all part of the world to pay special attention to save as many as two-third of the world's plant species in nature.

2. We agree with the proposal that a Global Strategy for Plant Conservation and associated programme for its development must be developed on top priority. It must be supported by the United Nations to facilitate appropriate Plant Conservation initiatives both at national and international level.

3. It is further proposed that the conservation strategy should be developed in full harmony with other initiatives being developed on global basis for sustainable conservation and use of biological resources in consultation with national programmes.

4. Conservation of Biological Diversity [illegible] the above mentioned declaration is one of the direction for obtaining fruitful results. Projects may be worked out to bring the ways and means recommended for actual practice. Delay in this respect would cost the loss of many more endangered species. Giving an emphasis on conservation of plants capable of growing under arid/ saline conditions on barren land will serve dual purpose. Conservation of plants capable of growing barren/saline [illegible] of the globe would reduce CO_2 concentration of the atmosphere and save humanity from global warming. Recent advances in plant sciences have made afforestation possible by selecting plants from world flora, which grow elsewhere

under prevailing stressed condition. Lack of good quality water has been overcome by using highly saline water in growing salt tolerant/halophytic plants at brackish sandy desert. Species for food, forage and fuel wood are available (which are gradually becoming extinct) which could be used for rehabilitation of these wasteland. It may be noted that occurrence of these barren land is far more than fertile land in the globe and rehabilitation of plant species capable of restoring the ecology of these areas would help in controlling desertification as well. Hence priority should be given for conservation of plant (i.e. halophytes) which are capable of growing arid/saline land for the benefit of mankind. Proper techniques for their rehabilitation may be adopted.

4 <u>Integrated ex-situ and in-situ conservation</u>

a. A definite time frame cannot be specified due to constraints in approval of relative projects and funding.
b. Agreeable because the [illegible] of AJK are relatively very [illegible].
c. Agreeable due to endangered state of several plant species found in AJK.
d. Strongly applicable as AJK has very diverse plant species that have economic potential.
e. Not applicable in AJK.
f. Agreeable but some research is needed in this area.

5 <u>Research Monitoring and Information Management</u>

a. Agreeable.
b. Agreeable and some work already done.
c. Not applicable as AJK Forest Department does not have computerised system yet.
d. Agreeable according to AJK Forest Department [illegible].

6 **Social and Economic Benefits of Plant Diversity Products & Services**

a. Agreeable subject to projects and funds.
b. Agreeable.
c. Strongly agreed.
d. Agreeable.

4. Education & Public awareness

a. Agreeable

5. Implementing the strategy

a. Agreeable

5. [illegible] [illegible] [illegible] [illegible] all the [illegible] [illegible] for the initiatives to be taken for Plant Conservation. This is also an important [illegible] of the Convention on Biodiversity. [illegible] the [illegible] Biodiversity Action Plan has already been prepared and all the initiatives proposed to be taken for the development of a [illegible] strategy for Plant Conservation [illegible] a part of it.

6. Plant Conservation is of vital importance [illegible] [illegible] ecosystems and the diversity contained in them. The strategy and actions recommended in Biodiversity Action Plan (BAP) should be [illegible] [illegible] [illegible] action [illegible] it [illegible] Umbrella under which [illegible] [illegible] [illegible] [illegible]