

Jakhra - Naliya - Tira - 1st

Centred around Tira - 2nd

Haji Pir - Bani - Dhond - 3rd

Koteswar - Sangipuram - Narain sarobari - 4th

Pinglurwar - Lighthouse area - Mandvi - Bhuj - 5th

Bhuj - Great Rann - India bridge

Terra area in the district of _____ of Kutch in Gujarat.
A report.

A one week visit to Terra village ^{and some neighbouring areas} of Kutch ~~area~~ ^{district} in Gujarat was undertaken by two trustees (Chairman included) and the Director (coordination of the Corbett Foundation during the first week of Feb, '98). The broad outline of the ecological situation here is summed up below.

The most striking feature that is noticed by a newcomer to this area is the sparse human population in a large tract of semi-arid landscape with open grassland, at places interspersed by dry deciduous scrub forest. The landscape is generally large spreading flats and moderately undulating terrain. Isolated villages are widely spread with cultivated land around. In the large gaps between such villages there are large ^{spaces} ~~areas~~ of wilderness areas, either of grassland or dry deciduous scrub forests, which supports some wildlife. These areas are under moderate to severe pressure of grazing by domestic stock, mainly goats and sheep besides a reasonable number of buffaloes and cows. There are some areas under the Forest Dept and some plantations have been raised which look successful and encouraging. But large areas appear to be govt. land without any particular land use besides grazing by domestic stock * * *

Fauna:- The most common of the wild animals found in these areas appears to be the Chinkara and Nilgai. Such animals, either singly or in small groups are found in many areas, their concentration being higher in the Jakhar - _____ region. Besides, common black rumped hare, jackals, and Indian fox, common Indian mongoose and wild boar are also not uncommon. The most interesting species could easily be the Indian wolf or also the Hyena, found in the region. Another equally interesting and probably more rare species that also occurs in this area is the Caracal

The status of this endangered species is indeterminate but appears to be rare. The other rare species which deserves special mention is the Great Indian Bustard, which is spotted not so infrequently. The Hukera Bustard is and the Lesser Florican ^{are} also present in the area.

Besides there is rich rodent life and a multitude of insects and reptiles available in the area which form part of the intricate food chain. Also there is extremely rich birdlife, particularly a broad spectrum of water birds available in the region. Though this region is located in an area of scanty rainfall and dry water table, yet there are some water bodies, besides a large area having brackish water, being in the close vicinity of the Arabian sea and the Gulf of Kutch. These water bodies including the extensive stretch of backwaters support a large variety of waterfowl including Flamingos, Storks, Herons, Pelicans, ducks and a very large variety of waders. Dinosaur cranes are very common in the whole region. There are also a wide variety of raptors in the area including Falcons, Harriers, Eagles, Buzzards, Shikra, Hawks and Baza etc.

A very large waterbody located near Haji Pir area of what is commonly called Bana area, was visited where a spectacle of strictly large congregation of water birds could be witnessed. The most spectacular sight was the congregation of a single group of ~~Royal~~ Pelicans which could be between 1500 to 2000 in number. Most of these birds appeared to be Royal Pelicans with some spot-billed Pelicans also being present. But it was learnt that this waterbody was not really perennial though during the current year this waterbody should contain sufficient water mainly because of the good rainfall that this zone had received during the last 2/3 years. It appears during some years the area may become completely dry during the late winter, followed by the summer and it is a matter of speculation as to where the large number of aquatic birds, most of whom are migratory, spend their winter. May be during such years of scarcity these huge numbers of birds take ~~to~~ refuge in the extensive ~~coastal~~ ^{but} ~~water~~ and numerous creeks that run inshore. The area certainly offers very big ~~to~~ scope of interesting observation, study, research and monitoring of avifauna.

Legal status:- Besides Narayan sarovar area which had been a wild life sanctuary, until a large chunk of it got drowned under pressure of industrialisation, there appeared to be not much presence of Forest authorities. Some plantations have been raised under social forestry scheme in some areas, which

appeared to be well cared for. Such areas have become
 refuse for good wild animal populations, probably mainly because
 such plantation areas are protected from grazing by the
 domestic stock and hence retain excellent ground cover in the
 form of various grasses, herbs and shrubs. In and around several
 such plantation areas near Tera, Naliya and Chachchi etc. In and
 around such 'Donds' (local name for grasslands) a good population of
 Chinkora, Blue bull and wild boar could be spotted. Some 'Dens'
 which had been recently used by ^{wild dogs} and Hyrnah also could
 be visited. One Hyrnah was seen on the main road near Naliya Tera
 during the evening and one solitary wolf was seen in the late
 afternoon (6-10 PM.) near Naliya. The wolf was seen very closely
 crossing the main road and it appeared to be a nursing mother.

The ecological condition of the region appeared to be extremely
 fragile and heavily dependant for biomass productivity on the
 vagaries of very uncertain and erratic monsoon. The natural flora is
 mostly xerophytic and the wild animals are hardly adapted to
 availability of very limited water. Ground water in many areas
 is often quite brackish and salt formation ^{on the surface} due to evaporation in some
 areas in the coastal belt is probably an indicator of harsh living
 conditions for all species including man. Large scale migration of
 people, resident of this area, due to prolonged drought condition is in
 record during the last 100 to 200 years. In fact there is an old
 local saying, which goes something like - "If it does not rain for
 one year, just watch. If it does not rain for two consecutive years,
 start thinking (how to deal with). If it does not rain in 3 successive
 years, start packing and if it does not rain even in the 4th year,
 move away." This old saying probably betrays the ^{fragile} ecology of the
 region quite clearly, as also the wisdom of the people quite clearly.
 This also indicates why the region is rather sparsely populated and
 why there has been migration of people in search of better pastures. The
 agricultural productivity of this region is understandably rather poor
 which seems to be the chief reason of the local population depending
 heavily on business traditionally.

The traditional attitude of general people in the region appears to
 be ^{natural} environment friendly. A large section of the populace is strictly
 vegetarian and abhors killing of any animal. Use of fuelwood and
 grazing by domestic stock appears to be two ways the natural cover
 is used which beyond a limit is without doubt detrimental to the
 fragile natural ecosystem supported by the area. Besides there are
 some segments of the people who traditionally hunt for protein, which
 also affects the wildlife status of the region, to add to the vagaries of
 whimsical climate conditions that appears to be acting as limiting factor.

Another decimating factor affecting the wildlife adversely is the
 extensive and large scale presence of the army, air force and various para-
 military staff in the entire area. This area is very close to the porous
 international border and has to be closely guarded. It has been widely

reported by various local people that such armed forces are a trigger-happy lot and indulge in wide spread poaching of wild animals almost anywhere. Naturally this is serious pressure on the status of wildlife and cannot be controlled easily. The only way this menace can be effectively dealt with seems to be coordinating carefully with the army and paramilitary organisations, who are known to have provided very valuable help in protection of wildlife and forest in various frontiers of India. But admittedly Govt of India and the state govt of Gujarat shall have to come forward and take the lead in controlling the misplaced, and wrong steps of our otherwise gallant armed force. I don't think, this should be difficult to curb this attitude of the armed forces, which is often misplaced as "sportsmanship and chivalry". However, the presence of the wolves in the area is strongly resented by the local people because of the species' tendency to go for the domestic sheep, goat, etc., mainly because of lack of adequate naturally wild preybase. It is reported that villagers quite often locate dens of wolves and eliminate the cubs & sometimes even the mother. The wolves are naturally excessively shy & very difficult to sight.

Though there is some presence of Forest Dept. in the area, mainly for social forestry, there seems to be almost no presence of wildlife authority outside the Suddar Surovar Wildlife Sanctuary area. However, it was extremely pleasant that to meet a forest guard of Social Forestry who came on a motorcycle to know our purpose of visiting the area in a grassland where there was a good population of 'chinkara' i.e. wild boar. On talking to him, he told us that people moving in jeeps frequent such areas for hunting wild animals, which he said was near impossible to stop. Many villagers to whom we spoke to also seem to resent such poaching but pleaded helplessness. They own dare not speak about such incidents which may result in their facing possible reprisal.

Though the current status of wildlife in this region is sparse, yet, talking to the elderly people of the area, it seemed wild animals had been abundant 50-60 years back. ~~They~~ The carrying capacity of the area is definitely under some limitations but in ^{the} absence of any big predator there appears to be no reason why the status of the herbivores cannot be restored to normal if the decimating biotic interference can be effectively controlled. In fact ⁱⁿ for an area like the Kutch, restoration of the natural ecosystems to its natural level is of topmost importance to maintain the natural productivity which in any case is low.

highly controversial

Low priority for wildlife accorded by the state Govt. is manifest in the de-reservation ~~off~~ of a major part of the Narayan Sarovar W.L.S. for the sake of the establishment of a cement factory. It is interesting that the cement factory is being locked up at present even before it went into production, for whatever the reasons that maybe. It is strange that the State Govt. de-reserved a protected area without even ensuring the viability of the industry, which certainly doesn't speak high about their priority for forestry and wildlife management. Parts of the wildlife sanctuary had been visited where devastating effects of over-grazing was all too explicit to be missed by anyone.

Under this situation of abysmally poor care shown for renewable natural resources by the Govt. it appears that people's activism can ~~be~~ prove extremely useful & in salvaging the rammant resources and subsequently to rejuvenate them through proper protection arranged by the local communities. It will naturally require to communicate with the local communities very intensively to rouse their traditional sentiments in favour of conservation. This will require extensive studies about the socio-economics of these communities and also their life styles, ~~and~~ aspirations and their traditional back grounds. Once this task is properly done, it should be possible to devise a social plan in close consultation with the target people to intermix long term social interests commensurate with ecological interests of the region. If this aim is achieved, the local people may be entrusted with the job of protecting the neighbouring forests and wildlife by themselves.

For this a group of villages with their nucleus at Tora may be targetted and the composite area to be covered may be carefully surveyed and identified. Such a target area may probably be named as "Tora Nature Conservation Area" or any other suitable name to start with. The State Govt. of Gujarat, as also the Govt. of India should be kept informed about such a project and their approval taken in the matter.

Representatives from the target villages, the local Forest officers (Rangers & below) and the representatives of the Nature Conservation Unit based at Tora may form a committee to discuss and take decisions about the proposed activities to be undertaken. Such activities should aim at judicious use of the natural resources (grazing, collection of firewood, use of water resources etc.) ameliorating the living condition of the poor, health care, veterinary care for domestic stock, environmental awareness campaign and education and above all protection of the wild animal life in the area.

In simpler words the plan should be to evolve a model of genuine "Ecodevelopment Plan" to ensure protection of and rejuvenating the ecological interests of the region along with improvement of the "Quality of life" of the local people. The basic underlying theme of the plan is to understand that "Quality of life" is actually dependant on Ecological stability and not on ^{hard} economics alone. This plan will thus bear the basic difference with normal Rural Development Plans, where all aims are to ensure economic development at any cost. ~~For~~ Such plans naturally opens the door for consumerism which raises the consumption level irrespective of the resource stock that is available.

However, the Conservation unit (under whatever name) may probably be set up by the Corbett Foundation with H.Q. at Tora and set the ball rolling, if the idea is acceptable to the Foundation. The aims and objectives of this plan ideally suits those of the Corbett Foundation. The kutch area has very high potential to be bloomed into a wildlife paradise of sorts, only if the area is protected from human greed and abuse. And given the traditional wisdom of the local communities a chance of revival this aim should not very difficult to achieve.

During the visit a large area by the creeks and the shoreline could not be seen. There are some mangrove areas and a large number of islands which are reported to be extremely rich in wildlife. Proper survey of all these areas should reveal very interesting matters about marine life also.

Some dedicated hard work with missionary zeal will be necessary to set things right. A lot of discussions, particularly with the local people and also with the govt. authorities will be essential to make a beginning. There is excellent scope of wilderness tourism in the region. Govt. has not taken cognizance of this aspect. The desolate and rugged spectacle in some areas with xerophytic plants provides an African spectral spectacle in Indian setting. Added to this is the sea coast and various creeks coming out rather abruptly. Tourists who desire to enjoy solitude and wilderness cannot ask for much more than what is presented in this God's own land!

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Bald → Terra area in the district of _____ Kutch in Gujrat.

A REPORT

A one week visit to Terra village and some neighbouring areas of Kutch district in Gujrat was undertaken by two Trustees (Chairman included) and the Director coordination of the Corbett Foundation during the first week of February '98. The broad outline of the ecological situation here is summed up below. *with some suggestions*

The most striking *feature* further that is noticed by a new comer to this area *is* the sparse human population in a large tract of semiarid landscape with open grassland, at places interspersed by *dry deciduous* *undulating* scrub forest. The landscape is generally large sprawling flats and moderately *undulating* terrain. Isolated villages are widely spread with cultivated land around. In the large gaps between such villages there are large spaces of wilderness areas, either of grassland or *dry deciduous* scrub forests, which supports some wildlife. These areas are under moderate to severe pressure of grazing by domestic stock, mainly goats and *sheep* *sheep* besides a sizeable member of buffaloes and cows. There are some areas under the forest deptt. and some plantations have been raised which look successful and encouraging. But large areas appear to be govt. land without any particular land use besides grazing by domestic stock.

Fauna : The most common of the wild animals found in these areas appears to *be* ~~the~~ Chinkara and Nilgai such animals, either *single* ~~single~~ or in small groups are found in many areas, their concentration being higher in the *Jakhaw* ~~Esmer~~ - region. Besides, common black *naped* ~~naped~~ hare, jackals, red Indian fox, common Indian mongoose and wild bear are also not uncommon. The most interesting species could easily be the Indian wolf as also the *Hyena* ~~Hydra~~, found in the region. Another equally interesting and probably more rare species that also occurs in this area is the Caracal.

The status of this *endangered* species is indeterminate but appears to be rare. The other rare species which deserves special mention is the Great Indian *Bustard* ~~Bustard~~, which is spotted not so infrequently. The Hubara *Bustard* ~~Bustard~~ and the lesser Florican are also *present* ~~present~~ in the area.

Besides, there is rich rodent life and a multitude of insects and *reptiles* ~~reptiles~~ available in the area which form part of the intricate food chain. Also there is extremely rich

aquatic

birdlife, particularly a broad spectrum of water birds available in the region. Though this ^{area} region is located in a region of scanty rainfall and ^{deep} ~~dup~~ water table, yet there are some water bodies, besides ^a ~~is~~ large area having brackish water being in the close vicinity of the Arabian sea and the Gulf of Kutch. These water bodies including the extensive stress of back waters support a large variety of water fowl including Flamingos, Storks, ^{Heron} ~~Hirons~~, Pelicans, ducks and a very large variety of waders. Demosail ^{cranes} ~~crans~~ are very common in the whole region. There are also a wide variety of raptors in the area including ^{Falcons} ~~factors~~, Harriers, ^{Eagles} ~~Eaghs~~, Buzzards, Shikra, Hawks and Baza etc.

Hajipeer

A very large waterbody, located near Hajipeer area of what is commonly called 'Band' area, was visited where a spectacle of ^{very} ~~steeply~~ large congregation of water birds could be witnessed. The most spectacular sight was the congregation of a single group, of Pelicans which could be between 1500 to 2000 in ^{number} ~~numbe~~! Most of these birds appeared to be ^{Rosy} ~~Roy~~ Pelicans with some ^{spot-} ~~spe~~ billed Pelicans also being present. But it was learnt that this waterbody was not really ^{perinial} ~~perimal~~ though during the current year this waterbody ^{should} ~~shoule~~ retains sufficient water mainly because of the good rainfall that this zone had received during the last 2/3 years. It appears during some years the area may become completely dry during the late winter followed by the summer and it is a matter of speculation as to where the large number of aquatic birds, most of whom are migratory, ^{spend their} ~~spend~~ this winter. May be during such years of ^{scarcity} ~~scarcity~~ these huge number of birds take ^{run} ~~r~~ refuge in the extensive ^{coastal} ~~coated~~ belt and numerous ^{run} ~~run~~ creeks that ^{run} ~~run~~ in shore. The area certainly offers very big scope of interesting, observation, study, research and monitoring of ~~airfauna~~ ^{avifauna}.

Besides Narayan sarobar area which had been ^a ~~dereserved~~ wild life sanctuary, until a large chunk of it got ^{observed} ~~observed~~ under pressure of Industrialisation, there ^{appears} ~~approved~~ to be not much presence of Forest authorities. ^{Some} ~~Some~~ plantations have been raised under social forestry scheme in some areas, which ^{appeared} ~~approved~~ to be well cared for. Such areas have become refuse for good wild animal populations, probably mainly because such plantation areas are protected from grazing by the domestic stock and hence retain excellent ground cover in the form of various grasses, herbs and shrubs. In and around several such plantation ^{exist near Terra} ~~areas near Terra~~, Naliga and Chachchi etc. In and around such 'Donds' (local name for grasslands) a good population of Chinkara, Blue ^{bull} ~~butt~~ and wild ^{boar} ~~boar~~ could be ^{spotted} ~~spotted~~. Some 'Dens' which had been recently used by wolyas and Hynak ^{One} ~~One~~ was ^{seen} ~~seen~~ on the main road near ^{Terra} ~~Terra~~ during the evening and one solitary wolf was ^{seen} ~~seen~~ in the

late afternoon (6-10 PM) near Naliya. The ^{wolf} wolf was seen very clearly crossing the main road and it appeared to be a nursing mother.

The ecological condition of the region appeared to be extremely fragile and heavily dependent for biomass productivity on the vagaries of very uncertain and erratic monsoon. The natural flora is mostly xerophytic and the wild animals are ^{hardy} hardly and adapted to availability of very limited water. Ground water in many areas is ~~after~~ ^{often} quite brackish and salt formation on the surface due to evaporation in some areas in the coastal belt is probably an indicator of harsh living conditions for all species including) man. Large ^{scale} ~~sea~~ migration of people, resident of this area, due to prolonged drought condition is in record during the last 100 to 200 years. In fact there is an old local saying, which goes something like - "If it does not rain for one year, just watch. If it does not rain for two consecutive years, start thinking (how to deal with). If it does not rain in 3 successive years, start packing and if it does not rain even in the 4th year, move away". This ^{old} ~~all~~ saying) probably betrays the ^{harsh and} ~~how~~ fragile ecology of the region as also the wishown of the people quite clearly. This also ^{indicates} ~~indents~~ why the region is rather sparsely populated and why there has been migration of people in search of better ^{pastures} ~~portures~~. The agricultural productivity of this region is understandably rather poor which seems to be the chief reason of the local population depending heavily on business traditionally.

The traditional attitude of general people in the region appears to be Nature ^{and} environment friendly. A large section of the populace is strictly vegetarian and abhors killing of any animal. Use of fuelwood and grazing by domestic stock appears to be two ways the natural cover is used which beyond a limit is without doubt detrimental to the fragile natural ecosystem, supported by the area. Besides there are some segments of the people, who traditionally hunt for protein, which also effects the wildlife status of the region to add to the vagaries of whimsical ^e climatic conditions that appears to be acting as limiting factor.

Another decimating factor effecting the wildlife adversely is the extensive and large scale presence of the army, airforce and various paramilitary staff in the entire area. This area is very close to the porous International border and has to be closely guarded. It has been widely reported by various local people that such ^{armed} ~~around~~ forces are a trigger-happy ^{lot} ~~bit~~ and indulge in wide spread poaching of wild animals almost anywhere. Naturally this is severe pressure on the status of wildlife and cannot be controlled easily. The only way this menace can be effectively dealt

with seems to be coordinating carefully with the army and paramilitary organisations, who are known to have provided very valuable help in protection of wildlife and forest in various ^{frontiers} ~~prosectors~~ of India. But admittedly govt. of India and the State Govt. of Gujrat shall have to come forward and take the lead in controlling the mispiaced and wrong steps of our otherwise gallant armed force. I don't think, this should be difficult to curb this attitude of the armed ^{forces} ~~for~~ us, which is often misplaced as "sportsmanship and chivalry". However, the presence of the ^{wolves} ~~wolves~~ in the area is strongly resented by the local people because of the species tendency to go for the domestic sheep, ^{goat} ~~goat~~, etc, mainly because of lack of adequate natural ~~the~~ wild preybase. It is reported that villagers quite often locate ^{dens} ~~dens~~ of ^{wolves} ~~wolves~~ and eliminate the ^{cubs and} ~~arms & sunshines~~ even the mother. The ^{wolves} ~~wolves~~ are naturally excessively ^{shy} ~~shy~~ & very difficult to sight.

Though there is some presence of Forest Dept. in the ^{area} ~~we~~, mainly for social forestry, there seems to be almost no presence of wildlife authority outside the Sardar Sarovar Wildlife Sanctuary area. However, it was extremely pleasant to meet a forest guard of social forestry who come on a motorbike to know our purpose of ^{visiting} ~~writing~~ the area in a grassland ^{where} ~~there~~ was a good population of chintara & wild ^{boar} ~~boar~~. On talking to him, he told us that people moving in jeeps frequent such areas for hunting wild animals which he said was near impossible to ^{stop} ~~stop~~. Many villagers to whom we spoke to also seem to resent such poaching but pleaded helplessness. They even dare not speak about such incidents which may result in their facing possible reprisal.

Though the current status of wildlife in this region is sparse, yet, talking to the elderly people of the area, it seemed wild animals had been abundant 50-60 years back. The carrying capacity of the area is definitely under some limitations. But in the absence of any big predator there appears to be no reason why the status of the herbivores cannot be restored to normal if the decimating biotic interference can be effectively controlled. In fact in an ^{arid} ~~semi~~ area like the ^{Kutch} ~~Kutch~~, restoration of the natural ecosystems to its natural level is of topmost importance to maintain the natural productivity which in any case is low.

Low priority for wildlife accorded by the state Govt. is manifest in the highly controversial de-reservation of a major part of the Narayan Sarovar W.L.S. for the ^{sake} ~~smoke~~ of the establishment of a cement factory. It is interesting that the cement factory is ^{found} ~~being~~ locked up at present ^{even} ~~non~~ before it ^{went} ~~went~~ into production, for

whatever the reasons that may be. It is strange that the State Govt. de-reserved a protected area without even ensuring the ^{viability} ~~visibility~~ of the industry, which certainly doesn't speak high about their priority for forestry and wildlife management. Parts of the wildlife sanctuary had been visited where ^{devastating} ~~diversifying~~ effects of overgrazing was all too explicit to be missed by anyone.

Under this situation of abysmally poor care shown for ^{the management of the} ~~renewable~~ natural resources by the Govt. it appears that peoples' ^{ing} ~~activism~~ can prove extremely useful in salvaging the remnant resources and subsequently to rejuvenate those through proper protection arranged by the local communities. It will ^{naturally} ~~naturally~~ require to communicate with the local communities ^{very} ~~many~~ intensively to rouse their traditional sentiments in favour of conservation. This will require extensive studies about the socio-economics of these communities and also their life style, aspirations and their traditional backgrounds. Once this task as properly done, it should her possible to devise a social plan in ^{close} ~~where~~ consultation with the target people to intermix long term social interests consumerate with ecological interests of the region. If this aim is achieved, the local people may be entrusted with the job of protecting the neighbouring forests and wildlife by themselves.

For this a group of villages with ^{Terra} ~~their~~ nucleus at ^{Tera} ~~Tera~~ may be targeted and the composite area to be covered may be carefully surveyed and identified. Such a target area may probably be named as "Tera Nature Conservation Area" or any other suitable same to start with. The State Govt. of Gujrat, as also the Govt. of India should be kept informed about such a project and their approval taken in the matter.

Representatives from the target villages, the local Forest Officers (Rangers & below) and the representatives of the Nature Conservation Unit based at Tera may form a committee to discuss and take decisions about the proposed activities to be undertaken. Such activities should aim at judicial use of the natural resources (grazing, collection of firewood, use of water resources etc.) ^{amioration of} ~~amioration~~ the living condition of the poor, health care, veterinary care for domestic stock, environmental awareness campaign and education and above all protection of the wild animal life in the area.

In simpler words the plan should be to ^{evolve} ~~evolve~~ a model of genuine Ecodevelopment Plan "to ensure protection and rejuvenating the ecological interests of the region

along with improvement of the "Quality of life" of the local people. The basic underlying theme of the plan is to understand that "Quality of Life" of the local people. The basic underlying theme of the plan is to understand that "Quality of Life" is ^{actually} ~~activity~~ dependant on Ecological stability and not on ^{hard} ~~here~~ economics alone.

This plan will ^{thus} ~~these~~ bear the basic difference with normal Rural Development Plans, ^{where} ~~all~~ aims are to ensure economic development at any cost. Such plans naturally opens the door for consumerism which raises the consumption level irrespective of the resource stock that is available.

* * *

However, the conservation unit (under whatever ^{name} ~~face~~) may probably be set up by the Corbett Foundation ~~of~~ with H.q. at ^{Terra} ~~Terra~~ and set the ^{ball} ~~ball~~ rolling, if the idea is acceptable to the Foundation. The aims and objectives of this plan ideally suits those of the Corbett Foundation. The Kutch area has very high potential to be bloomed into a wildlife paradise of sorts, only if the area is protected from human greed and ^{abused} ~~abused~~. And given the traditional wisdom of the local communities ^{chance of survival} ~~chance of survival~~ this aim should not ^{be} ~~be~~ very difficult to achieve.

During the visit a large area by the ^{creeks} ~~cracks~~ and the shoreline could not be seen. There are some mangrove areas and a large number of islands which are reported to be extremely rich in the wildlife. Proper survey of all these areas should reveal very interesting matters about marine life also.

Some dedicated hard work with missionary zeal will be necessary to set things right. A lot of discussions, particularly with the local people and also with the Govt. authorities will be essential to make a beginning. There is ^{excellent} ~~excellent~~ scope of wilderness tourism in the region. Govt. has not taken cognigence of this aspect. ^{so far} ~~so far~~. The desolate and ragged spectacle in some areas with zerophitie plants provides an African spectacle in Indian ^{setting} ~~setting~~. Added to this is the sea coast and various ^{creeks} ~~cracks~~ coming out rather abruptly. Tourists who desire to enjoy solitude and wilderness cannot ask for much more than what is presented in this ^{God's} ~~God's~~ own land!

* * *
→ "Development" ^{often} ~~often~~ currently aims at achieving objectives, which ^{often} ~~often~~ necessitates working at odds with nature, to defy nature, Man makes attempts to modify or win over nature without little consideration that his attempt for short time gain or advantage is invariably made at the cost of future natural (ecological) destabilisation. The Kutch region ~~is~~ has a very fragile & delicate ecological stability and hence ^{required} ~~required~~ a proper land use is of highest importance. Any plan must have this as the basic underlying theme carefully ^{insprained} ~~insprained~~.

TERRA AREA IN THE DISTRICT OF KUTCH IN GUJRAT

A REPORT

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The most striking features that is noticed by a new comer to this area is the sparse human population in a large tract of semiarid landscape with open grassland, at places interspersed by dry deciduous scrub forest. The landscape is generally large sprawling flats and moderately undulating terrain. Isolated villages are widely spread with cultivated land around. In the large gaps between such villages there are large spaces of wilderness areas, either of grassland or dry deciduousness scrub forests, which supports some wildlife. These areas are under moderate to severe pressure of grazing by domestic stock, mainly goats and sheep besides a sizeable member of buffalos and cows. There are some areas under the forest deptt. and some plantations have been raised which look successful and encouraging. But large areas appear to be govt. land without any particular land use besides grazing by domestic stock.

Fauna : The most common of the wild animals found in these areas appears to be Chinkara and Nilgai. Such animals, either single or in small groups are found in many areas, their concentration being higher in the Jakhaw - region. Besides, common black naped hare, jackals, red Indian fox, common Indian mongoose and wild boar are also not uncommon. The most interesting species could easily be the Indian wolf as also the Hyna, found in the region. Another equally interesting and probably more rare species that also occurs in this area is the Caracal.

The status of this endangered species is indeterminate but appears to be rare. The other rare species which deserves special mention is the Great Indian Bustard, which is spotted not so infrequently. The Hubara Bustard and the lesser Florican are also present in the area.

Besides, there is rich rhodent life and a multitude of insects and reptiles available in the area which form part of the intricate food chain. Also there is extremely rich

birdlife, particularly a broad spectrum of aquatic birds available in the region. Though this area is located in a region of scanty rainfall and deep water table, yet there are some water bodies, besides a large area having brackish water being in the close vicinity of the Arabian sea and the Gulf of Kutch. These water bodies including the extensive stress of back waters support a large variety of water fowl including Flamingos, Storks, Herons, Pelicans, ducks and a very large variety of waders. Demosail cranes are very common in the whole region. There are also a wide variety of raptors in the area including Falcons, Harriers, Eagles, Buzzards, Shikra, Hawks and Baza etc.

A very large waterbody, located near Hajipeer area of what is commonly called 'Bana' area, was visited where a spectacle of very large congregation of water birds could be witnessed. The most spectacular sight was the congregation of a single group, of Pelicans which could be between 1500 to 2000 in number! Most of these birds appeared to be Rosy Pelicans with some spot billed Pelicans also being present. But it was learnt that this waterbody was not really perinial though during the current year this waterbody retains sufficient water mainly because of the good rainfall that this zone had received during the last 2/3 years. It appears during some years the area may become completely dry during the late winter followed by the summer and it is a matter of speculation as to where the large number of aquatic birds, most of whom are migratory, spend their winter. May be during such years of scarcity these huge number of birds take refuge in the extensive coastal belt and numerous creeks that run in shore. The area certainly offers very big scope of interesting, observation, study, research and monitoring of avifauna.

Besides Narayan sarobar area which had been a wild life sanctuary, until a large chunk of it got dereserved under pressure of Industrialisation, there appears to be not much presence of Forest authorities. Some plantations have been raised under social forestry scheme in some areas, which appeared to be well cared for. Such areas have become refuse for good wild animal populations, probably mainly because such plantation areas are protected from grazing by the domestic stock and hence retain excellent ground cover in the form of various grasses, herbs and shrubs. In and around several such plantation exist near Terra, Naliya and Chachchi etc. In and around such 'Donds' (local name for grasslands) a good population of Chinkara, Blue bull and wild boar could be spotted. Some 'Dens' which had been recently used by wolves and Hyenas also could be visited. One Hyna was seen on the main road near Terra during the evening and one solitary wolf was seen in the late afternoon (6-10 PM) near Naliya. The wolf was seen very clearly crossing the main road and it appeared to be a nursing mother.

The ecological condition of the region appeared to be extremely fragile and heavily dependent for biomass productivity on the vagaries of very uncertain and erratic monsoon. The natural flora is mostly xerophytic and the wild animals are hardy and adapted to availability of very limited water. Ground water in many areas is often quite brackish and salt formation on the surface due to evaporation in some areas in the coastal belt is probably an indicator of harsh living conditions for all species including man. Large scale migration of people, resident of this area, due to prolonged drought condition is in record during the last 100 to 200 years. In fact there is an old local saying, which goes something like - "If it does not rain for one year, just watch. If it does not rain for two consecutive years, start thinking (how to deal with). If it does not rain in 3 successive years, start packing and if it does not rain even in the 4th year, move away". This old saying probably betrays the harsh and fragile ecology of the region as also the wishown of the people quite clearly. This also indicates why the region is rather sparsely populated and why there has been migration of people in search of better pastures. The agricultural productivity of this region is understandably rather poor which seems to be the chief reason of the local population depending heavily on business traditionally.

The traditional attitude of general people in the region appears to be Nature and environment friendly. A large section of the populace is strictly vegetarian and abhors killing of any animal. Use of fuelwood and grazing by domestic stock appears to be two ways the natural cover is used which beyond a limit is without doubt detrimental to the fragile natural ecosystem, supported by the area. Besides there are some segments of the people, who traditionally hunt for protein, which also effects the wildlife status of the region to add to the vagaries of whimsical climatic conditions that appears to be acting as limiting factor.

Another decimating factor effecting the wildlife adversely is the extensive and large scale presence of the army, airforce and various paramilitary staff in the entire area. This area is very close to the porous International border and has to be closely guarded. It has been widely reported by various local people that such armed forces are a trigger-happy lot and indulge in wide spread poaching of wild animals almost anywhere. Naturally this is severe pressure on the status of wildlife and cannot be controlled easily. The only way this menace can be effectively dealt with seems to be coordinating carefully with the army and paramilitary organisations, who are known to have provided very valuable help in protection of wildlife and forest in various frontiers of India. But admittedly govt. of India and the State Govt. of Gujrat shall have to come forward and take the lead in controlling the misplaced

and wrong steps of our otherwise gallant armed forces. I don't think, this should be difficult to curb this attitude of the armed forces, which is often misplaced as "sportsmanship and chivalry". However, the presence of the wolves in the area is strongly resented by the local people because of the specie's tendency to go for the domestic sheep, goat, etc. mainly because of lack of adequate naturally wild preybase. It is reported that villagers quite often locate dens of wolves and eliminate the cubs and even the mother. The wolves are naturally excessively shy & very difficult to sight.

Though there is some presence of Forest Dept. in the area, mainly for social forestry, there seems to be almost no presence of wildlife authority outside the Sardar Sarovar Wildlife Sanctuary area. However, it was extremely pleasant to meet a forest guard of social forestry who come on a motorbike to know our purpose of visiting the area in a grassland where there was a good population of chinkara & wild boar. On talking to him, he told us that people moving in jeeps frequent such areas for hunting wild animals which he said was near impossible to stop. Many villagers to whom we spoke to also seem to resent such poaching but pleaded helplessness. They even dare not speak about such incidents which may result in their facing possible reprisal.

Though the current status of wildlife in this region is sparse, yet, talking to the elderly people of the area, it seemed wild animals had been abundant 50-60 years back. The carrying capacity of the area is definitely under some limitations. But in the absence of any big predator there appears to be no reason why the status of the herbivores cannot be restored to normal if the decimating biotic interference can be effectively controlled. In fact in an arid area like the Kutch, restoration of the natural ecosystems to its natural level is of topmost importance to maintain the natural productivity which in any case is low.

Low priority for wildlife accorded by the state Govt. is manifest in the highly controversial de-reservation of a major part of the Narayan Sarovar W.L.S. for the sake of the establishment of a cement factory. It is interesting that the cement factory is found locked up at present even before it went into production, for whatever the reasons that may be. It is strange that the State Govt. de-reserved a protected area without even ensuring the viability of the industry, which certainly doesn't speak high about their priority for forestry and wildlife management. Parts of the wildlife sanctuary had been visited where devastating effects of overgrazing was all too explicit to be missed by anyone.

Under this situation of abysmally poor care shown for the management of the renewable natural resources by the Govt. it appears that peoples' activism can prove extremely useful in salvaging the remnant resources and subsequently to rejuvenate those through proper protection arranged by the local communities. It will naturally require to communicate with the local communities very intensively to rouse their traditional sentiments in favour of conservation. This will require extensive studies about the socio-economics of these communities and also their life style, aspirations and their traditional backgrounds. Once this task is properly done, it should be possible to devise a social plan in close consultation with the target people to intermix long term social interests commensurate with ecological interests of the region. If this aim is achieved, the local people may be entrusted with the job of protecting the neighbouring forests and wildlife by themselves.

For this a group of villages with nucleus at Tera may be targeted and the composite area to be covered may be carefully surveyed and identified. Such a target area may probably be named as "Tera Nature Conservation Area" or any other suitable name to start with. The State Govt. of Gujrat, as also the Govt. of India should be kept informed about such a project and their approval taken in the matter.

Representatives from the target villages, the local Forest Officers (Rangers & below) and the representatives of the Nature Conservation Unit based at Tera may form a committee to discuss and take decisions about the proposed activities to be undertaken. Such activities should aim at judicious use of the natural resources (grazing, collection of firewood, use of water resources etc.), amelioration of the living condition of the poor, health care, veterinary care for domestic stock, environmental awareness campaign and education and above all protection of the wild animal life in the area.

In simpler words the plan should be to evolve a model of genuine Ecodevelopment Plan "to ensure protection and rejuvenating the ecological interests of the region along with improvement of the "Quality of life" of the local people. The basic underlying theme of the plan is to understand that "Quality of Life" is actually dependant on Ecological stability and not on hard economics alone. This plan will thus bear the basic difference with normal Rural Development Plans, where all aims are to ensure economic development at any cost. Such plans naturally opens the door for consumerism which raises the consumption level irrespective of the resource stock that is available.

"Development" currently aims at achieving objectives, which often necessitates working at odds with nature, to defy nature. Man makes attempts to modify or win over nature without little consideration that his attempt for short time gain or advantage is invariably made at the cost of future natural (ecological) destabilisation. The Kutch region has a very fragile & delicate ecological stability and hence a proper land use is of highest importance. Any plan must have this as the basic underlying theme carefully ingrained.

However, the conservation unit (under whatever name) may probably be set up by the Corbett Foundation with H.q. at Terra and set the ball rolling, if the idea is acceptable to the Foundation. The aims and objectives of this plan ideally suits those of the Corbett Foundation. The Kutch area has very high potential to be bloomed into a wildlife paradise of sorts, only if the area is protected from human greed and abuse. And given the traditional wisdom of the local communities chance of success of this aim should not be very difficult to achieve.

During the visit a large area by the creeks and the shoreline could not be seen. There are some mangrove areas and a large number of islands which are reported to be extremely rich in the wildlife. Proper survey of all these areas should reveal very interesting matters about marine life also.

Some dedicated hard work with missionary zeal will be necessary to set things right. A lot of discussions, particularly with the local people and also with the Govt. authorities will be essential to make a beginning. There is excellent scope of wilderness tourism in the region. Govt. has not taken cognizance of this aspect so far. The desolate and rugged spectacle in some areas with zoroophitic plants provides an African spectacle in Indian setting. Added to this is the sea coast and various creeks coming out rather abruptly in view adds to the excitement. Tourists who desire to enjoy solitude and wilderness cannot ask for much more than what is presented in this God's own land !

S. DEB ROY



Kutch Ecological Research Centre

(A Unit of THE CORBETT FOUNDATION)

RURAL MEDICAL OUTREACH PROGRAMME PROPOSAL FOR THE YEARS 1999-2002

The Corbett Foundation is a registered charitable public trust set up in 1994 with the purpose of promoting measures to restore harmony between human being and Nature and to undertake welfare activities for any humanitarian cause. Amongst its explicit objectives is the conservation of flora and fauna and culture of what is known as Corbett Country in the Kumaon Region of Uttar Pradesh – an area with unique ecosystems and rich bio-diversity. Hence its name “The Corbett Foundation”. However the mandate of the Foundation is to undertake welfare activities to promote its broad objectives anywhere in India.

The major activities of the Foundation are related to wildlife conservation, Environmental education and awareness programme's, ecodevelopment, vocational training especially for women and the rural medical outreach programme.

The Foundation started its activities in 1994 targeting about 100 villages situated around the Corbett Tiger Reserve with an approximate population of 50,000. Many of these villages are very remote and have remained beyond the reach of developmental activity. One of the basic needs of these villages as enunciated by the villagers themselves was medical aid, which was both inaccessible and unaffordable. To meet this request of the people the Foundation has been successfully running an outreach programme for the last five years. The details of this programme have been given in the booklet enclosed. In this period the Foundation has emerged as the leading NGO in Corbett area and in the field of eco-development in the State of Uttar Pradesh.

The Foundation acquired infrastructural facilities in Tera Village in the Kutch District of Gujarat through donation of property by its Chairman Shri Dilip Dharmasey Khatau whose ancestors lived in this village. It was decided to use this facility as a base for welfare activity in the area and thus was established the Kutch Ecological Research Centre. This region of Gujarat is again economically backward and out of the mainstream of developmental activity. The nearest medical facility is at Naliya or Bhuj towns. The benefits of State Welfare Activities have not yet substantially reached this area. It receives very poor rainfall leading to frequent drought situations which can become so severe as to force many people to out migrate, sometimes permanently. The Abdasa Taluka of this District in which village Tera is located consists of 162 villages out of which 20 have been completely abandoned.

To begin with the Abdasa Taluka was targeted for a medical outreach programme. The following 27 villages were shortlisted for immediate attention keeping in view the constraints of resources and logistics:

1. Hamirpur.
2. Naini Dhufi,
3. Moti Dhufi,
4. Bitra,
5. Bharapar,
6. Paath,
7. Karaiya,
8. Lakhania,
9. Jatvadh,
10. Bara,
11. Sujapur,
12. Ashapur,
13. Godtharo,
14. Suddhro(Nain),
15. Kulatalav,
16. Randhanpur,
17. Kunathia.
18. Rava,
19. Bhachunda,
20. Usatia,
21. Nangia,
22. Kuvapadar,
23. Pithoranagar,
24. Tera,
25. Narayannagar,
26. Moti Sudhro,
27. Berachiya.

Contd..(2)

: 2 :

The launch of this programme coincided with an unfortunate natural calamity. A cyclonic storm hit the area and caused extensive damage of life and property. A relief team consisting of an ambulance, two doctors and other support staff was immediately pressed into the area. This team found that the damage caused by the cyclone was much more than expected and reported by the media and the government. The following objectives were given to the Foundation team:

1. To help prevent outbreak of diseases that are rampant after such natural calamities.
2. To treat those who were already suffering from such diseases.
3. To distribute food grains amongst the needy
4. To assess the extent of damage to that resettlement can be planned at least for those in immediate need.

Unfortunately the State Welfare agencies failed to rise to the occasion and could not even make a realistic assessment of the damage and in the beginning even informed the people that all was well. However, as the days passed, dead bodies started to be found and the dead cattle lying all around the fields and in village began to decompose. The people everywhere complained of neglect. Much later, some minor work like disposing of cattle carcasses, distribution of anti malaria drugs and some food material was carried out by the government. Total number of villages covered by the Foundation's team was 26 and about 600 patients were examined and treated. Besides direct treatment advise was given to villagers about symptomatology of some common diseases like typhoid, gastroenteritis, malaria and skin problems which were found rampant. Some measures for initial management of such diseases, purification of water, personal hygiene and sanitation were also propagated in addition to distribution of food grains and fodder. A survey was also carried out in 28 villages to assess the extent of damage. According to our estimate in these villages more than 50,000 cattle heads died. About 14,000 people were affected in the Abdasa Taluka alone.

The response from the villagers was overwhelming. With the backdrop of this calamity the Corbett Foundation took a decision to set up a permanent medical facility at Tera Village as the base and has outlined an outreach programme to cover about 100 villages in Abdasa Taluka with an approximate population of 50,000. The building is being renovated. It is proposed to set up a permanent dispensary with two doctors a compounder, two medical workers, an ambulance a mobile clinic and a jeep with support staff. It is proposed to reach out to the villages with medical aid regularly with the help of a mobile clinic. The Foundation has sufficient experience in running such a programme at Corbett and this will be put to use in this much neglected area.

INTRASTRUCTURE

The basic infrastructure i.e. the building with furniture and fixtures have been provided by the Chairman of the Foundation.

Basic medical equipment will be purchased by the Foundation from its resources.

An ambulance has been provided by Mahindra & Mahindra.

A Jeep has been provided by Varun Shipping Co. Ltd, Mumbai.

Contd...(3)

: 3 :

What is required now is a mobile clinic the cost of which is Rs.5 lacs.

RUNNING COST

The running cost of the programme for three years is as follows:

I. Salaries		
a. Doctors (2)	2*Rs.13000*	12 months 3,12,000
b. Programme Officer	1*Rs.2500*	12 months 30,000
c. Compounder	1*Rs.2000*	12 months 24,000
d. Drivers(2)	2*Rs.2000*	12 months 48,000
e. Village Medical Workers(2)	2*Rs.1500*	12 months 36,000
	Total	4,50,000
II. Medicines		2,50,000
II. Other Costs		
a. Medical Camp Facilities		24,000
b. Vehicle running Costs		44,000
	Total	68,000
	Grand Total	7,68,000

The Corbett Foundation from its own funds will incur the following expenses:

Fifty percent of costs of medical camp facilities (expected expenditure Rs.48,000)

Fifty percent of cost running vehicles (expected expenditure Rs.88,000)

Administrative expenses.

Exposure visit of the Foundation's key staff to health programmes run by other NGOs.

Proposed Budget for 2000-01	Rs.8,44,800
Proposed Budget for 2001-02	Rs.9,29,280
Total amount requested	Rs.25,42,080

Any contributions towards this project may please be forwarded in the name of "THE CORBETT FOUNDATION" at A-3, Geetanjali Enclave, New Delhi-110017.

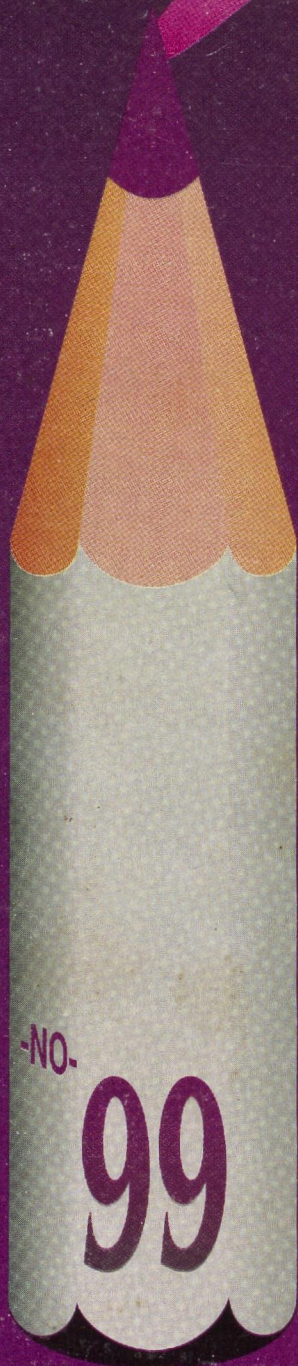
The Foundation is registered under the Delhi Public Trust Act, under no.183/94-95.

The Foundation is also registered under the Foreign Contribution (Regulation) Act under No.231650853.

All donations to the Foundation are exempt from income tax under section 80-G of the Income Tax Act, 1961 under registration no.DIT (Exem.)/95-96/T-375/903 dated 24.1.1996.

Yours faithfully,
for **KUTCH ECOLOGICAL RESEARCH CENTRE**

Chairman



SPIRAL PAD

Neelgagan[®]



Instit. - of Desert Ecology - Dir - Y. D. Singh.

KACHCHH
(KUCCHHA) CONSERVATION PROJECT.

We the residents of the parts of Abdasa Taluka of the Dist. of ~~Kutch~~ ^{Kutch} in the State of Gujrat have the following submission to make before the Govt. of Gujrat for favour of sympathetic consideration.

Background information :-

1) There are approximately . . . villages in the Taluka of Abdasa with a total population of approximately
The total population of live stock held by the villagers in this area is as follows, - cows, buffaloes
sheep & goat

The villagers of this area depend heavily on agriculture and pastoral practices, which is traditional way of life for these people. The villages are rather small (only . . . villages hold 2000 or above of human population) and are ~~spaced~~ widely distributed, compared to other parts of the country. In the intervening areas between the villages there exist extensive and sprawling grassland on undulating landscape, which is often broken by deep ravines, ~~so~~ created by soil run off and erosion. There are very few trees in these areas, though Prosopis has made inroads at places, which is not really welcome by the village folks.

Beside agriculture a large section of the people also depend for their livelihood on pastoral practices. Large stock of cattle and even larger stock of sheep and goat is owned by people and the total number of such stock could approximately be around Shearing of the hair of the sheep for production of wool and milking of goats provides some financial help to these generally poor people of the area.

Some of the villages do have excellent ^{traditional} handicraft products worked out mainly by women. These products are in very good demand and is finding ^{its place in} even foreign markets.

There are mainly two communities of people in this area of belonging to either Muslim or Hindu ~~religion~~ religion. Quite a sizeable population of Jains also are residents here. The people of different religions believe live in exemplary harmony and even rare communal trouble is unheard of. This ideal harmony is notable here since the early days of Muslim settlement. In fact the population here is a conglomerate of various sects of people many of whom had migrated to this area with their own tradition and ~~custom~~ culture and now forms the mosaic of the composite existence in perfect harmony.

Condition of the people:- The Abdasha taluka is ^{situated} in the arid zone with very low and erratic rainfall. The average rainfall in the area is about 10" but drought condition is very common. During the recent past, of course, rainfall has been quite generous and quite unlike what prevails in this zone. There are some small streams widely distributed but mostly go dry during the better part of the year. Ground water recharging is naturally very poor and only in some areas soft water is available which is potable. The low and sparse availability of potable water is the main ~~reason~~ reason of lower ~~pop~~ human population density in the area.

However, the agricultural practice barely produces the local requirements of the people and economy has to be supplemented by other means - mainly through pastoral practices. Even so periodic droughts, sometimes extended upto four years or more, cause serious disruption to economic viability. During such difficult periods a lot of people had been migrating out of Abdasha) Kutchh. ⁱⁿ ~~for~~ search of better prospects. In fact there are a large number of people

from Kutch region who are settled in various parts of India and even abroad and ~~are~~ some of these people are doing exceptionally well.

But generally speaking the common people here are poor to very poor and live just about the subsistence line. These are hardworking people, used to harsh climatic conditions and are surprisingly content with very little. Water is the main limiting factor of the region against agricultural prosperity.

Ecological conditions of the area:- The intervening areas between villages, which are generally widespread, contains almost pure grassland and are used by the villagers and herdsmen as grazing ground. There are only few trees interspersed in these grassland and often trees are felled and taken away, mainly as fuelwood. There are some seasonal streams in these areas which often form ravines and gorges because of erosion, caused during the rains because of very sparse ground cover on the undulating terrain. These grasslands forms excellent habitat for various species of wild animals some of which are now rare and threatened.

General mention may be made of the Chinkara, Nilgai, wild boar, Hyena, Wolf and Caracal amongst other species of raptiles & Rhodents etc. Besides, there are many species of birds, both resident and migratory amongst which the Great Indian Bustard, the Haryana Bustard and the Lesser florican is noteworthy. A large number of water birds including the two cranes are also regular visitors in the water bodies, created mostly by dams.

The people generally are very conservation minded and even tolerate a good deal of depredation by the wildlife. Poaching of wild animals is rare and is really looked down upon by all communities. But unfortunately a good deal of poaching of wild animals goes on almost openly, committed by the armed forces including Air Force staff. Villagers ~~are~~ do not dare to even protest against such scourage for natural fear of possible reprisal.

Very heavy grazing by the domestic stock which quite literally bare the ground during April-May causes serious set back for the wildlife both by way of competition for food and also very serious disturbance caused by the herdsmen. A large number of such herdsmen literally invade the grassland during this dry period, coming from distant places, where animal fodder had already been finished. They camp here for short periods, only to mow down the remnant last blades of ground cover.

Govt. has taken up some programmes, beneficial to the communities, but these are grossly inadequate even during fair time when there is no drought. Isolated small villages are ~~too~~ scattered too far and wide to benefit from such plans and only few villages which are on the main roads do achieve some benefits. Medical service for human beings and veterinary care for the domestic stock, ~~is~~ the two most valuable services barely reaches the interior villages, not to speak of other benefits. More than 50 years of Indian independence has actually failed to light up this area, quite unlike other areas of Gujarat. There is an ~~act~~ acute need to do something for this area, but the local people, who are poor, simple and content with very little, may never be able to derive the probable benefits.

However, it is good news that Corbett Foundation, under the chairmanship of Sri Dilip Dharamsey Khatau has reached the area and has ~~shown~~^{expressed} the intentions of doing something for the people of Abdasha Taluka. Sri Khatau ancestrally belongs to the village of Tera. But his family, who are well known in business for 200 years, had migrated from Tera to Bombay during the famous drought years of 1850s. But Mr. Khatau surprisingly has been coming back to Tera occasionally seemingly to keep his roots with his ancestral backward place of origin.

He has a penchant for nature preservation and has been working to help save the Tigers in Corbett Tiger Reserve of Uttar Pradesh since 1994. With this objective in view he has set up an N.G.O. under the title of The Corbett Foundation and this foundation has already got recognition and commendation from not only the local people amongst whom they are working but also from the State Govt. of U.P. and the Central Govt. They are well known even internationally.

The Corbett Foundation has surveyed the area (partially) of the Abdasha Taluka and are confident that a composite plan can be worked out for the area which will make it possible for the human population to live comfortably with a satisfactory 'Quality of Life' in complete harmony with nature and also preserve the natural renewable resources of the area (which includes 'wildlife') simultaneously through this composite planning. It may be mentioned here that overuse and abuse of the natural resources of this arid area has decimated the resources very severely. Many species of flora and fauna actually stand scarce/rare already.

We had a series of discussions with Mr. Khatau and his men regarding the future plan that they want to

adopt and we are convinced that the intentions are noble and selfless. The main reason to think so is that,-

The Foundation will plan and implement the plan in full consultation with the village people and only ^{after} when such plan is endorsed by the village community. A committee will be in charge of the entire planning and implementation process and this committee will have all the village Panchyat heads as its members, besides one representative from the Corbett Foundation.

The Foundation will help in planning agricultural development along with veterinary care and other ^{social} welfare activities for which govt. agencies will be tackled by them.

Under the umbrella committee as mentioned above a second committee will be formed to plan for ecological restoration of the dwindling natural resources of the area, which has probably already affected the natural productivity of this zone besides putting tremendous pressure on the wildlife community. This committee/sub-committee will be headed by the personal of the Corbett Foundation, who has suitable persons to carry out such ecological works. Besides members of the local village Panchyats will also be members of this sub-committee who will be able to contribute indigenous knowledge, so valuable in such works.

With the above future plans in the offing, we would fervently request you to kindly patronise our joint effort in the which will be totally apolitical in nature with equal status offered to all the communities, cutting across caste creed and religion.

community land

To The

Draft.

Sir,

We the undersigned Gaon Panchayats of the villages listed below, respectfully beg to submit before you the following important subject, related to future sustainability and welfare of the human communities. The subject matter may kindly be ^{granted} appropriate attention and a considerate decision will oblige us.

1) The Abdasha Taluka is ~~is~~ situated in the west south of the Kutch Dist. which often reels under harsh or hostile climatic conditions. The annual average rainfall here is barely 10" and the area is infamous for periodic droughts, sometimes continuing for several years at a stretch.

2) Availability of ground water is very poor and in most areas such water is unusable even for agriculture. In fact lack of ^{availability of} water is the main reason, which stands against prosperity of the area. Under the circumstances, it is not at all surprising that the area is sparsely populated and is virtually out of contention 'Development'

3) The population of the area (Abdasha) is like a conglomerate of various religious belief and practicing their diverse vocational practices, but with full social amity. This area can be easily identified as an ideal example of "Unity in diversity", so commonly heard of but very seldom seen.

The major way of sustenance of the local people here is a) Agriculture and b) pastoral practice. As mentioned earlier, ^{harsh} climatic conditions limits the prospects of both these vocations. Due to limited opportunities locally, a lot of people have migrated out and many are doing well elsewhere in the country or even abroad. There is a long standing tradition of overseas trade connection nurtured from Kutch. However such trade benefits very few. Industrialisation has not caught up like other parts of Anjrat, except some mining and attempt to set up a cement factory, the results of which

may easily spell danger for the area.

However, the people living here in complete harmony with themselves and nature are generally poor to very poor and are heavily dependant on for their survival on the ~~most~~ ^{scarce} natural resources that are available. In fact the land available and its utilisation is the key factor to our survival.

But unfortunately no land use plan has ever been followed and all the grassland besides the agricultural land is put to ~~put~~ pastoral practices. Due to extraordinary pressure of grazing by a huge domestic stock, both local and ~~from~~ ^{converging from} other areas the grasslands are devastated. As a result the natural productivity has gone down and desertification with soil run off has also started. Naturally we are facing a dangerous situation.

Fortunately an N.G.O "Kutch Ecological Research Centre", a subsidiary of 'Corbett Foundation' (Registered at Delhi), headed by Mr. Dilip Dharamsy Khatan has started to operate from the village Tara. Mr. Khatan ancestrally belongs to this village and though his forefathers migrated from here nearly ¹⁵⁰ 75 years back, he has come back to the village and intends to make a ^{serious} attempt to improve the poor men's lot by judicious application of a proper land use plan in the entire area with an eye to restore ecological interests, including saving the wild animals, resident in the area. The plan is to work along with the local people, taking their suggestion and guidance at all steps in planning and implementation. The working plan will include various activities like agriculture, health care, veterinary care etc. and will also include managing the grassland beyond the village area.

We had been already discussing about the matter for nearly one year and had understood the basics of the plan, which is acceptable to us, when suddenly the last cyclone hit us. Mr. Khatan spontaneously came to our help and arranged for immediate relief, though he does not yet have any infrastructure at Kutch. We are

not now going into further and smaller details of the whole plan, specially about our roles and maintaining our traditional right of use etc. But on the whole, we have no ~~no~~ reason to doubt the honest and selfless motive of this N.G.O. & thus endorse the plan.

We would now request you to kindly patronise this unique plan of man sustaining on nature, without impoverishing the same. We will also request you to kindly participate in the final plan through financial and infrastructural input through different sectorial plans. Govt. effort of development for the last 52 years has not made any dent in our languishing situation. May be the composite effort find a way.

DRAFT

KACHCHH CONSERVATION PROJECT

We the residents of the parts of Abdasa Taluka of the Distt. of Kutch in the state of Gujarat have the following submission to make before the Govt. of Gujarat for favour of sympathetic consideration.

Background Information :-

The villagers of this area depend heavily on agriculture and pastoral practices, which is the traditional way of life for these people. The villages are rather small (only villages hold 2000 or above human population) and are widely distributed, compared to other parts of the country. In the intervening areas between the villages there exist extensive and sprawling grassland on undulating landscape, which is often broken by deep ravines, created by soil run off and erosion. There are very few trees in these areas, though Prosopis has made inroads at places, which is not really welcome by the village folks.

Besides agriculture a section of the people also depend for their livelihood on pastoral practices. Large stock of cattle and even larger stock of sheep and goat is owned by people and the total number of such stock could approximately be around -----Shearing of the hair of the sheep for production of wool and silling of goats provides some financial help to these generally poor people of the area.

Some of the villages do have excellent traditional handicraft products worked out mainly by women. These products are in very good demand and is finding its place in even foreign markets. There are mainly two communities of people in this area of belonging to either Muslim or Hindu religion. Quite a sizeable population of Jains also are residents here. The people of different religious belief live in exemplary harmony and even rare communal trouble is unheard of. This ideal harmony is notable here since the early days of Muslim settlement. In fact the population here is a conglomerate of various sects of people many of whom had migrated to this area with their own tradition and culture and now forms the mosaic of the composite existence in perfect harmony.

Condition of the people :- The Abdasha Taluka is situated in the arid zone with very low and erratic rainfall. The average rainfall in the area is about 10" but drought condition is very common. During the recent past, of course, rainfall has been quite generous and quite unlike what prevails in this zone. There are some small streams widely distributed but mostly go dry during better part of the year. Ground water recharging is naturally very poor and only in some areas soft water is available which is potable. The low and sparse availability of potable water is the main reason of lower human population density in the area.

However, the agricultural practice barely produces the local requirements of the people and economy has to be supplemented by other means – mainly through pastoral practices. Even so periodic droughts, sometimes extended upto four years or more, cause serious disruption to economic viability. During such difficult periods a lot of people had been

migrating out of Abdasha / Kutchh in search of better prospects. In fact there are a large number of people from Kutchh region who are settled in various parts of India and even abroad and some of these people are doing exceptionally well.

But generally speaking the common people here are poor to very poor and live just about the subsistence line. These are hardworking people, used to harsh climatic conditions are surprisingly content with very little. Water is the main limiting factor of the region against agricultural prosperity.

Ecological conditions of the area: - The intervening areas between villages, which are generally widespread, contains almost pure grassland and are used by the villagers and herdsmen as grazing ground. There are only few trees interspersed in these grassland and often trees are felled and taken away, mainly as fuel-wood. There are some seasonal streams in these areas which often form ravines and gorges because of erosion, caused during the rains because of very sparse ground cover on the undulating terrain. These grasslands form excellent habitat for various species of wild animals some of which are now rare and threatened. General mention may be made of the Chinkara, Neelgai, wild boar, Hyena, wolf and Caracal amongst other species of reptiles & Rodents etc. Besides, there are many species of birds, both resident and migratory amongst which the great Indian Bustard, the Hubara Bustard and the Lesser Frigatebird is noteworthy. A large number of water birds including the two cranes are also regular visitors in the waterbodies, created mostly by dams.

The people generally are very conservation minded and even tolerate a good deal of depredation by the wildlife. Poaching of wild animals is rare and is really looked down upon by all communities. But unfortunately a good deal of poaching of wild animals goes on almost openly, committed by the armed forces including Airforce staff. Villagers do not dare to even protest against such scourge for natural fear of possible reprisal.

Very heavy grazing by the domestic stock which quite literally bare the ground during April-May causes serious set back for the wildlife both by way of competition for food and also very serious disturbance caused by the herdsmen. A large number of such herdsmen literally invade the grassland during this dry period, coming from distant places, where animal fodder had already been finished. They camp here for short periods, only to mow down the remnant last blades of ground cover.

Govt. has taken up some programmes, beneficial to the communities, but these are grossly inadequate even during fair time when there is no drought. Isolated small villages are scattered too far and wide to benefit from such plans and only few villages, which are on the main roads, do achieve some benefits. Medical service for human beings and veterinary care for the domestic stock, the two most valuable services barely reaches the interior villages, not to speak of other benefits. More than 50 years of Indian independence has actually failed to light up this area, quite unlike other areas of Gujarat. There is an acute need to do something for this area, but the local people, who are poor, simple and content with very little, may never be able to derive the probable benefits.

However, it is good news that Corbett Foundation, under the chairmanship of Sh. Dilip Dharamsey Khatau has reached the area and has expressed the intentions of doing something for the people of Abdasha Taluka. Sh. Khatau ancestrally belongs to the

village of Tera. But his family, who are well known in business for 200 years, had migrated from Tera to Bombay during the famous drought years of 1860s. But Mr. Khatau surprisingly has been coming back to Tera occasionally seemingly to keep his roots with his ancestral backward place of origin.

He has a penchant for nature preservation and has been working to help save the Tiger in Corbett Tiger Reserve of Uttar Pradesh since 1994. With this objective in view he has set up an N.G.O. under the title of the Corbett Foundation and this foundation has already got recognition and commendation from not only the local people amongst whom they are working but also from the state Govt. of U.P. and the central Govt. They are well known even internationally.

The Corbett Foundation has surveyed the area (partially) of the Abdasa Taluka and are confident that a composite plan can be worked out for the area which will make it possible for the human population to live comfortably with a satisfactory quality of life in complete harmony with nature and also preserve the natural renewable resources of the area (which includes wildlife) simultaneously through this composite planning). It may be mentioned here that over use and abuse of the natural resources of this arid area has decimated the resources very severely. Many species of flora and fauna actually stand scarce/rare already.

We had a series of discussions with Mr. Khatau and his men regarding the future plan that they want to adopt and we are convinced that the intentions are noble and selfless. The main reason to think so is that :-

The Foundation will plan and implement the plan in full consultation with the village people and only after such plan is endorsed by the village community. A committee will be in charge of the entire planning and implementation process and this committee will have all the village Panchayat heads as its member, besides one representative from the Corbett Foundation.

The Foundation will help in planning agricultural development along with veterinary care and other social welfare activities for which Govt. agencies will be tackled by them.

Under the umbrella committee as mentioned above, a second committee will be formed to plan for ecological restoration of the dwindling natural resources of the area, which has probably already effected the natural productivity of this zone besides putting tremendous pressure on the wildlife community. This committee / sub committee will be headed by the personnel of the Corbett Foundation, who has suitable persons to carry out such ecological works. Besides members of the local village Panchayats will also be members of this sub committee who will be able to contribute indigenous knowledge, so valuable in such works.

With the above future plans in the offing, we would fervently request you to kindly patronize our joint effort in the community land which will be totally apolitical in nature with equal status offered to all the communities, cutting across caste, creed and religion.

Native Crop Diversity in Abdasa Taluka of Kutch, Gujarat

There is a worldwide concern over the loss of the diversity of plant genetic resources. A particular worry is the substitution of a diverse set of genetically variable races by a few genetically uniform modern varieties. The Variety of native and introduced species have co-evolved with the different kinds and intensities of agriculture and have become an integral part of this man-modified ecosystem.

The study was conducted for crop biodiversity from January to March 1999. The inventory was carried out to identify which cultivars are sown in marginal rainfall areas, how they are preserved and used, as well as farmers attitude towards native crops. The data was collected from secondary sources and interviews. The groups interviewed include both old and young farmers. To avoid bias, farmers from all communities and different land holdings were interviewed. The women folk were also interviewed. The survey was done in 91 percent (n=138) villages in Abdasa Taluka.

Kutch district of Gujarat is constituted by nine talukas of which Mundra, Mandvi, Enjar and Abdasa are coastal Talukas. *Rann* (Saline mudflat) occupies half the area of Kutch. Kutch has no perennial rivers. The moisture holding capacity in the soil in Kutch is very low. Ninty to ninty three percent areas are under dryland farming. Farmers gain no stability due to erratic rainfall thus forcing them to migrate to cities. Most of the cropfields are lying fallow in Kutch. Only 11% of total cultivable land in Kutch has irrigation facility. The crop fields having irrigation facilities are called "*Wadis*". After 1970 the *wadis* increased manifolds in Bhuj, Enjar, Bhachau, Nakhatvana, Mandvi, Mundra and Rapar Talukas. Kharif crops (June-Sept) require a minimum of 300mm water (40mm/15days), this requirement is not fulfilled due to the unpredictable rainfall. Therefore to facilitate more water lifting, mechanised irrigation practices were in use, which led to overuse of ground water sources.

Abdasa has an area of 2398.26 sq km situated at 23⁰16'N, 68⁰49'E in West Kutch, Gujarat. Abdasa has a population of 8,6407 people (Census 1991), the Major communities are *Bhanushali, Jains, Luanas, Brahmans and Muslims*. It has 166 villages of which 151 are inhabited. Of the total area of Abdasa only 12, 185.84 ha are under forest, 85,430.38 ha is unirrigated and 52,837.81 ha is under cultivable waste (gauchar and groves). In Abdasa only 38.83% of the total area is cultivable of which only 5.16% is irrigated.

Abdasa gets a rainfall of 10 inch on an average. The ground water reservoirs are recharged to a very limited extent which is of poor quality, 2400 sq. km. of Abdasa can be recharged by 166 lakh cubic m, of which 67% is used and 2424 ha area is irrigated. Major, medium and minor irrigation schemes

including tube wells were taken up in Abdasa. The latter was taken up during scarcity periods such works comprise construction and repair of 1) Tanks and bandharas, 2) Checkdams and percolation tanks, 3) Lift -irrigation schemes, 4) Dry wells, 5) Tube wells.

A total of 22 checkdams are present in Abdasa. The major dams constructed are on Kankavati River in 1952-56 (irrigate 5587 ha), in Jangadiya on Khari river in 1978-87 (irrigate 1491 ha), on Mithi river in 1980-87 (irrigates 2364 ha) and Berachia on Naira River in 1980-87 (irrigates 597 ha). A total of 2000 wells, 385 oil engines and 227 electric motor engines are functional for irrigation works. In Abdasa the animal-powered water-lifting device known as "Kos" (*mohte* or *charus* in other parts of Gujarat) was intensively used. This device was suitable to lift water from wells with depth of 10-30 m. Today "KOS" is displaced by oil engines, tube wells electric pumps and submersible pumps, moreover the water table too has gone down as low as 300-1000 ft.

The agricultural implements in use are mainly traditional as they are easily made, cheap, repairable and constructed out of material locally available. For plough and harrowing; wooden ploughs, hoes and seed drills (*Kaath*) are being used. The wooden cart (*Rakheda*) having wooden wheels and inter-cultivation implement (*Koraiyo*) were used in Abdasa. Today these implements do exist along with slightly modified versions like iron ploughs, seed-cum-fertilizer drills and wooden carts having rubber tyres.

The small millets have been the last priority crops as far as promotion and development are concerned. Adaptation to poor resource base, consumption by a weaker section of the community made these crops an indispensable component of dryland agriculture. These are drought resistant hardy crops requiring meagre cash inputs and pesticides. These millets have low yield, early maturity, easy cultivation and good nutritive value of grain and fodder. As small millets are consumed at the home and village level, their true value was not appreciated. The low productivity, lack of suitable machinery for processing at village level, irregular supply and poor demand in urban population are some of the reasons of lack of interest of farmers in these crops.

In all 18 crop varieties were reported to be grown 30-40 years ago. These crop varieties were all *desi* (native). Seven varieties of *Jowar* were grown of which *Pucchar* and *Rattar* are grown even today. Four varieties of *Bajra* were grown in Abdasa. *Ghau* (wheat) had six varieties, of which none are grown any more and their seeds are also not available locally. The native crops grown in this area are *tal*, *Batti*, *Sau*, *Cheno*, *Anu* and *Alsi*. Basically these are drought resistant crops, which were grown in *wadis* only but with very less watering needs.

THE MINOR MILLETS WERE GROWN TILL 1949-50 IN ABDASA TALUKA. THE *Nangli* (*Finger Millet*), *Cheno* (*Common Millet*), *Anu* (*Panic seeds*), *Batti* (*Kodo Millet*) were the 'famine reserves' of Abdasa and all old farmers' group discussions focused on the little known, less preferred small millets. They expressed that these were hardy crops which provided grains and fodder during the major drought periods in 1940 to 1942. The varieties of bajra and jowar were grown all over Abdasa but since last 20 to 30 years almost all villages have given up, as these crops were economically less viable and later their seeds were also not available. The other crops grown are *magh* (*Green Gram*), *matth* (*Kidney Bean*), *chana* (*Chick Pea*), *guvar* (*Cluster Bean*) and *kulthi* (*Horse Gram*). In 1942 the locusts had destroyed the crops all over Kutch, even trees were defoliated. It was only *Guvar* which survived the locust attack.

The groundnut (*Singha* or *Mukphari*) varieties used to be grown about 30 years ago were dwarf and creeper-like which got displaced by taller plant variety. *Tal*, *Raydo* and *Arenda* were grown earlier as well as now also. The cotton variety '*Kala*' having closed pods is replaced by open pod variety. Today the cash crops like groundnut, cotton, *guvar*, *tal*, *raydo* and *isabgol* are dominant in Abdasa. Sunflower has been introduced in this area since last five years but is not successful.

Traditionally, a multi-cropping program has been in operation. The mixed cropping technique requires greater labour for line sowing, interculture and inter sowing of the mixed crops. The harvesting operation is more labour intensive as it has to be selective between the two crops. Thereby the area cultivated is the same but the labour requirement increases.

In the past, most cultivators kept a reserve stock of their farm produce and used it as seeds for sowing in the next season. There were traders who also used to supply native seeds to the farmer. Today multi-purpose co-operative societies and private enterprises play an important role in supplying hybrid seeds. The farmers say that even if they desire to grow some of the "*Desi*" (native) variety there are no seed banks and so they resort to hybrid forms.

The "*Desi*" *Dhai* (grains) has a much longer shelf-life (ranging from 2-4 yrs.). The millets were mixed with Vani (ash of cowdung) and dried neem leaves and stocked in "*Kothars*" (barrel like structure made of clay and donkey dung). Today the shelf life of any hybrid grain is less than six months to a year. These grains are mixed with pesticides which are harmful to human on consumption, if not properly cleaned.

Socio-economic changes and technological advancement led farmers to adopt high yielding hybrid varieties thus reducing traditional crop diversity. The remaining genetic resources need efficient on-farm management and proper marketing for utilization and conservation of traditional crops. An action oriented

project is needed to explore the traditional cultivation practices and promotion of on-farm conservation of native varieties.

There is an urgent need for conservation, multiplication and dissemination of seeds of native crop varieties. Here the idea is not to undermine the benefits of high productivity of hybrid varieties but to complement it in an effort to ensure that the farmers in the drought-prone areas have a more reliable food base.

It is important to change the consumer attitudes towards coarse cereals by having educational programmes.

There are very few development programmes, seed production and distribution is lacking.

Time-tested technology has not been transferred to the farmers of this region.

Control of *Prosopis juliflora* and feral pigs in the area.

People to meet

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