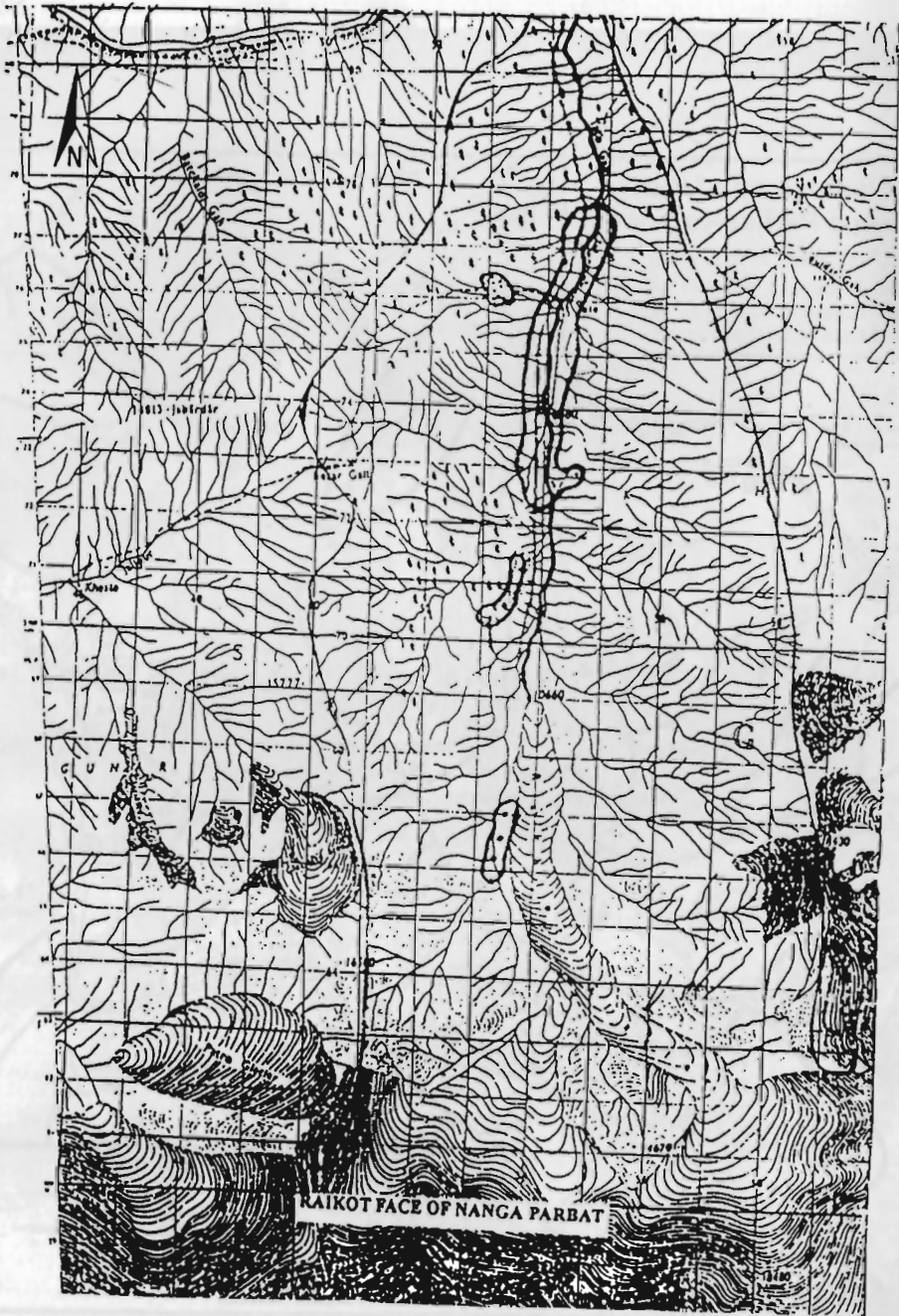


Annex 1

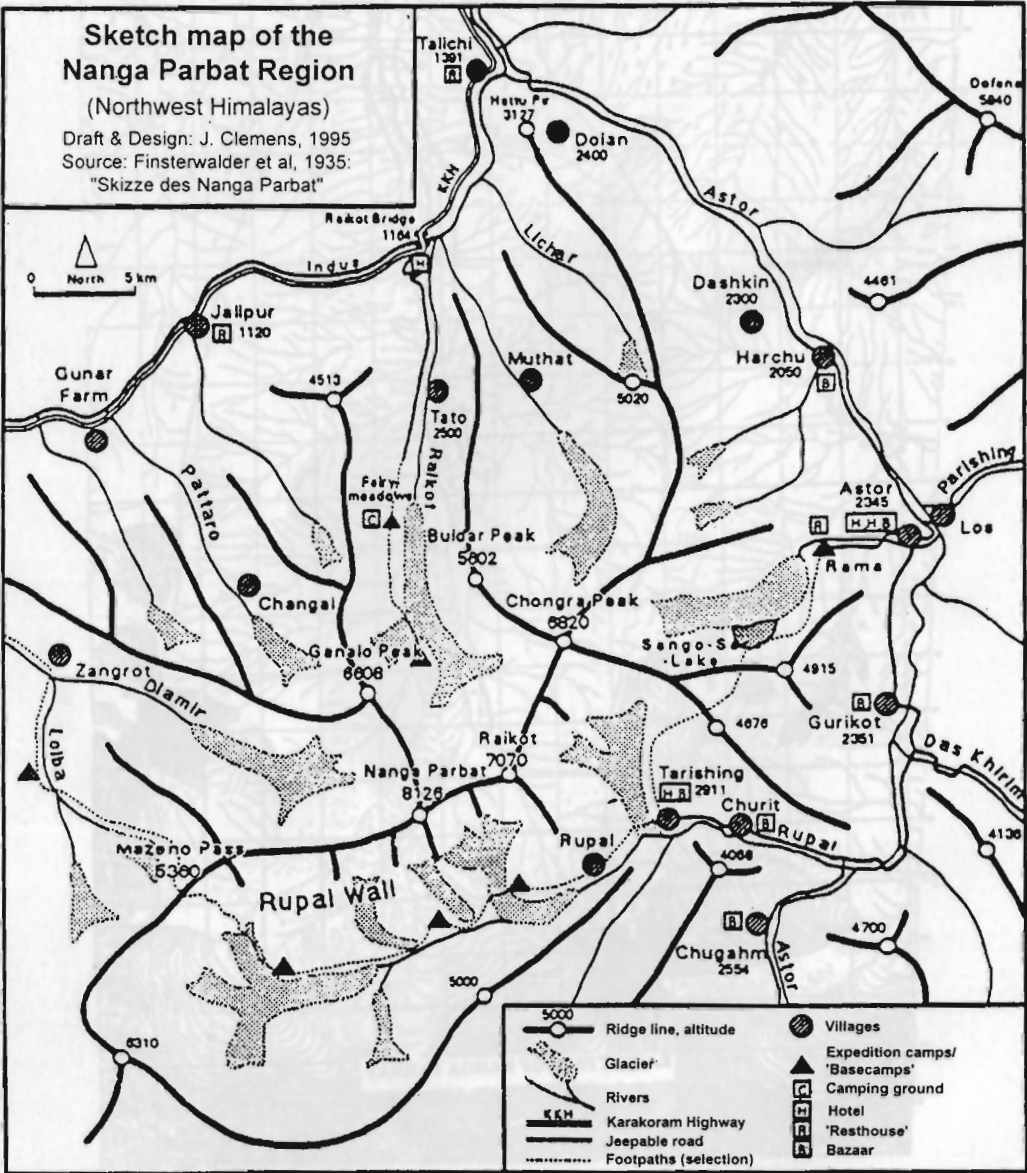
Maps and Figures

Map A: Guide Map of Raikot Valley



- Trail
- River
- Jeepable Track
- Settled Area

Map A: Guide Map of Raikot Valley















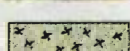









(map adapted from Clemens 1994)

Map B: Sketch Map of the Nanga Parbat Region



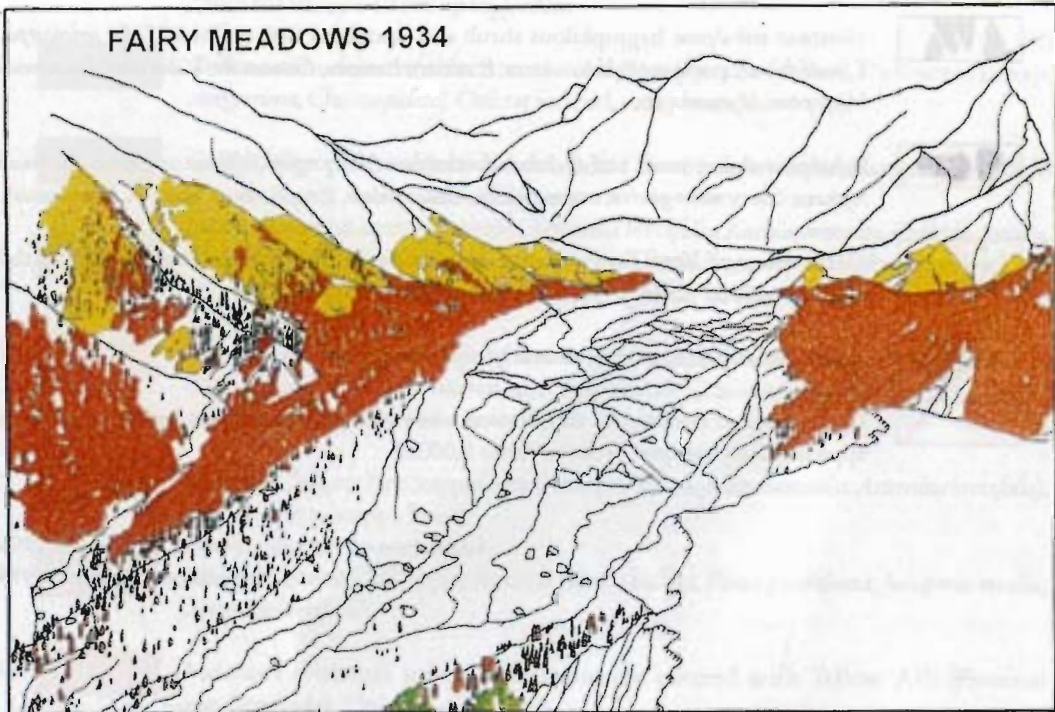
Map C: *Vegetation Cover in Raikot Valley* (Source: Troll 1939)

1.  Colline desert steppe of dry hot valleys: treeless, shrubs, grasses, herbs (*Artemisia fragrans*, *Capparis spinosa*, *Haloxylon thomsonii gilesii*, *Heliotropium dasycarpum*, *Stipagrostis plumosa*). From the valley bottom up to 2,000m.
2.  Colline semi-desert with scattered small trees (*Pistacia khinjuk*, *P. chinensis* sub sp. *integerrima*, *Olea cuspidata*). Only at inclined, rocky locations.
3.  Colline hygrophilous shrubs and woodland (*Tamarix ramosissima*, *Elaeagnus hortensis*).
4.  Montane treeless artemisia steppe (*Artemisia brevifolia*, *Kochia prostrata*, *Koeleria cristata*, *Krascheninnikovia ceratoides*). In spring, rich flora of grasses and herbs in between the shrubs 2,000 to 3000m in sunny locations up to > 4,000m.
5.  Montane artemisia tree-steppe (*Artemisia brevifolia*, *Juniperus excelsa*) with various shrubs (*Rosa webbiana*, *Daphne mucronata*, *Ribes orientale*, *Cotoneaster*). Density of points represents the density of trees.
6.  Montane Chilgoza Pine Steppe-forest (*Pinus gerardiana*, *Juniperus excelsa*, *Artemisia brevifolia*). Tree-steppe to steppe forest.
7.  Montane Stone Oak Steppe-forest (*Quercus balloot*, *Pinus gerardiana*, *Juniperus excelsa*, *Artemisia brevifolia*).
8.  Montane artemisia steppe, predominately covered with Yellow Ash (*Fraxinus xanthoxyloides*). Only on scree slopes.
9.  Montane moist coniferous forest (*Pinus wallichiana*, *Picea smithiana*; with *Abies webbiana* in the South). Mainly at shady locations from 2,800 to 3,700m.
10.  Montane semi-humid coniferous forest (*Pinus wallichiana*, *Picea smithiana*) interspersed with *Juniperus excelsa*.
11.  Montane-subalpine moist coniferous forest (cf. No. 9) interspersed with birch (*Betula utilis* sub sp. *jacquemontiana*) also aside the groves and avalanche tracks.
12.  Subalpine birch forest (*Betula utilis* sub sp. *jacquemontiana*). In shady locations above the moist coniferous forests from 3,500 to 3,900m, in grooves and avalanche tracks of the coniferous forest belt down to 2,700m.
13.  Alpine (subalpine to high alpine) turf, meadow, and dwarf-shrub (*Kobresia capillifolia*, *Polygonum affine*). Towards the cold desert, gradually disappearing.
14.  Subalpine-alpine willow shrub (*Salix karelinii*). Only on shady slopes.
15.  Subalpine-alpine rhododendron dwarf-shrub (*Rhododendron anthopogon*). Mainly mixed with No. 14. Only on Shady slopes.
16.  Subalpine-alpine Juniper dwarf-shrub (*Juniperus squamata*, *J. communis* sub sp. *alpina*). Preferably in sunny locations.

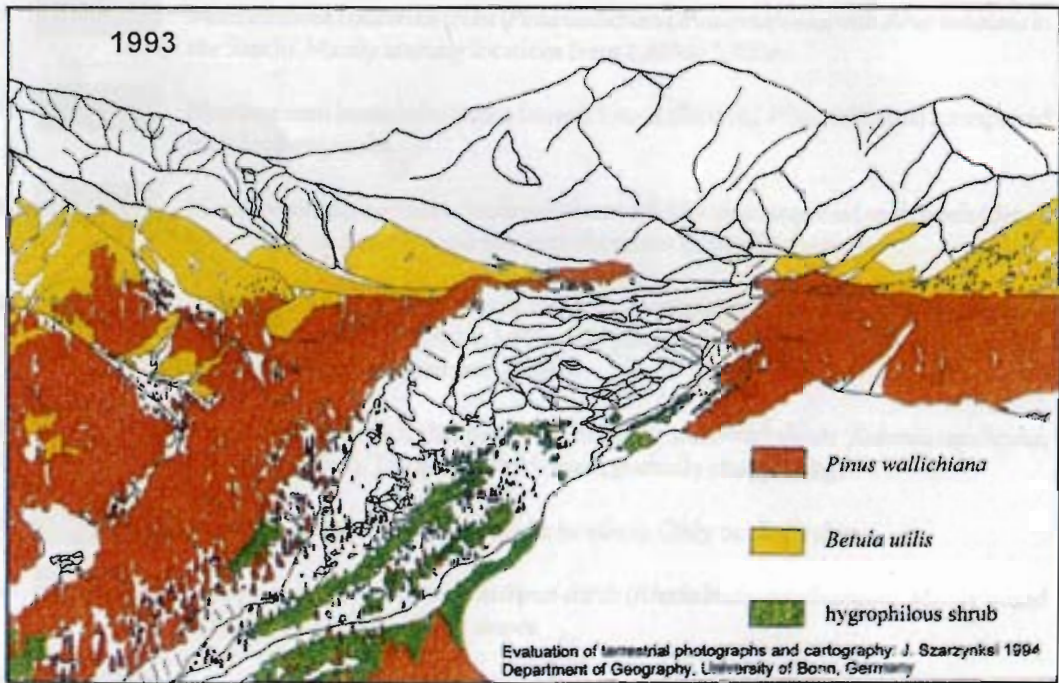
- 17  Subalpine-alpine meadow with juniper trees (*Juniperus turkestanica*). Only in sunny locations up to 3,900 (4,200)m.
- 18  Montane-subalpine hygrophilous shrub and woodland with willows (*Salix sericocarpa*, *S. wallichiana*), poplars (*Populus caspica*, *P. ciliata*), *Lonicera*, *Cotoneaster*, *Viburnum*, *Euonymus*, *Hippophae*, *Myricaria*, etc.
- 19  Subalpine-alpine moist turf and dwarf-scrub on fenny soils (*Blysmus compressus*, *Kobresia royleana*, *Carex micro-glochis*, occasionally *Aulacomnium*, *Eriophorum scheuchzeri*, *Salix caesia*).
- 20  Occurrences of Yew (*Taxus baccata* sub sp. *wallichiana*). Only in the Pattaro Valley at the western edge of the map.
- 21  Cultivated area (irrigated fields and gardens with meadows' edge).
- 22  Upper limit of continuous distribution of vascular plants (relying on a few samples approximately mapped between 4,900-5,000m).

Adaptation of Botanical Names: B. Dickore 1995
 Translation: M. Munz 1995

FAIRY MEADOWS 1934



1993



Maps D & E: Environmental Changes in Fairy Meadows

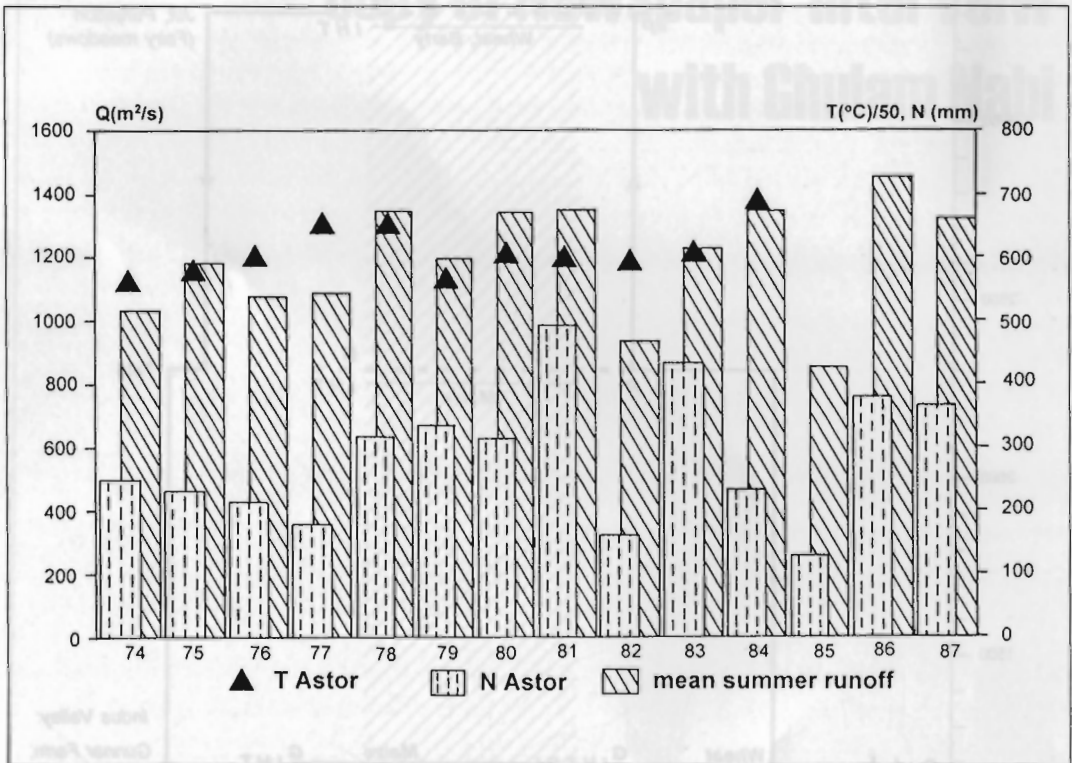


Figure 1: Winter Precipitation and Mean Summer Run-off

Correlation between mean summer runoff (May-September) of Astor river and winter precipitation (N) as well as the mean minimum temperatures (T) of the climatic station Astor (1947-1987).
 (Source: Kolb 1994: 74)

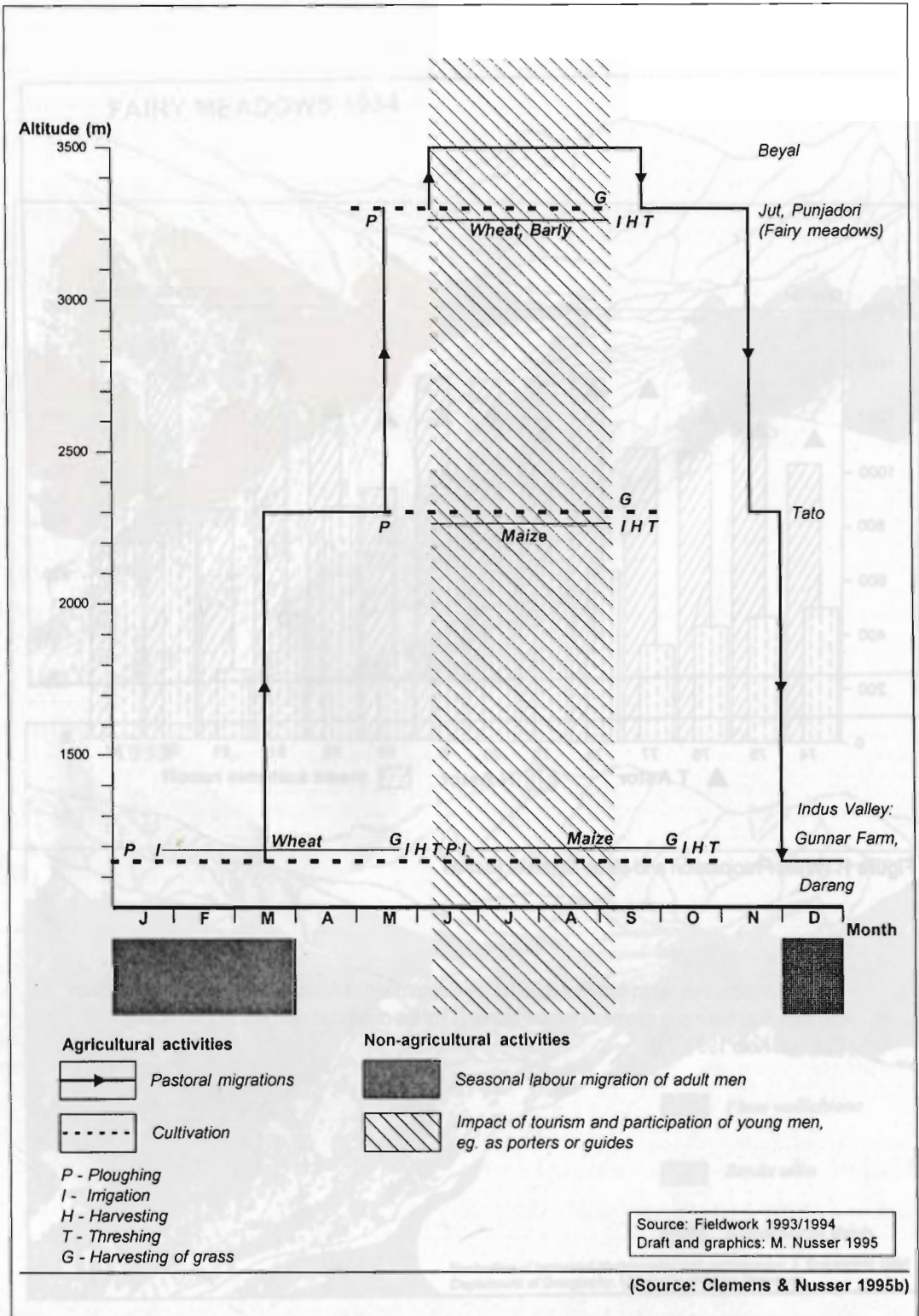


Figure 2: Stages of Land Use in Raikot Valley: The Example of Tato

Annex 2

Copy of Newspaper Interview with Ghulam Nabi

10. I would like to ask you about the village organisation. How do you
organise the people of the village? Do you have any plans, where there was only 10
or 15 some particular families being organised in the
beginning, how should it develop in the near future, and
about the members of Brig. Adam Beg and his sons, how did he react when you
wanted to organise the villagers? What is your idea of the further development of the
village? What do you want to do next, also with your NGO, maybe also a
tourist concerning the situation of the forests? What shall be done with the forests
in the next ten years or so? These are the questions that I want to discuss with you,
but maybe you also have some ideas or points that we should talk about also.

GN: The main reason for forming the village organisation was to protect the forest.
Because it is a community-owned forest and the community do not really have the
authority ... for (such) disasters. They sold this forest about 12 years back to Brig
Adam at a very cheap rate. The reason for selling this so cheap was to get a long road
constructed up to the village. And, after a few years, we started to realise that tourism is
a more important source of income than the trees. If we maintain the forest, we can
attract more and more tourists, which is better for the ecology. We did have
some sort of organisation which is called zauli (zawal), most of the time was for animal
hunting by goat and other community work like the construction of pony tracks. Zaulis
were responsible for collecting people or collecting the taxes which they implement on
the activities of outsiders, called maaliya. But this did not include the forests, so we
founded this small organisation, and we are trying to do some development work, e.g.,

Interview with Ghulam Nabi by Jurgen Chemens
13 November 1995, Aachen, Germany

(Abridged with minimal editing)

JC: I want to ask you about the situation at Fairy Meadows ? What was the reason to organise the people against Brig. Azlam Beg ? What were the very first approaches that you have made, whether there was unity in the village or whether there were only some particular families being organised in the village ? What is your idea about tourism, how should it develop in the near future, especially at Fairy Meadows ? What about the reactions of Brig. Azlam Beg and his sons, how did he react when you started to organise the villagers ? What is your idea of the further development of the entire village ? What do you want to do next, also with your NGO, maybe also a question concerning the situation of the forests ? What shall be done with the forests in the next ten years or so ? These are the questions that I want to discuss with you, but maybe you also have some ideas or points that we should talk about now.

GN: The main reason for forming the village organisation was to protect the forest. Because it is a community-owned forest and the community do not really have the awareness ... for (such) disasters. They sold this forest about 12 years back to Brig Azlam at a very cheap rate. The reason for selling this so cheap was to get a jeep road constructed up to the village. And, after a few years, we started to realise that tourism is a more important source of income than the trees. If we maintain the trees, we can earn and have more and more tourists, which is better for the ecology. We did have some sort of organisation which is called *zauti* (*zauti*, most of the time was for animal husbandry and other community work like the construction of pony tracks. *Zauti*(s) were responsible for collecting people or collecting the taxes which they implement on the animals of outsiders, called *maaliya*. But this did not include the forests. So we founded this small organisation, and we are trying to do some development work, e.g., water, sanitation, health projects, and primary education.

JC: How many years ago did you begin?

GN: Four years ago. Since last year we have this organised committee, you can say. Now we have a trial at the court against Azlam's sons. We, the locals are demanding at least 80-times more the price than he was paying. So it is really a hard time for him.

JC: Is it a trial about the forests or a trial about the land at Fairy Meadows?

GN: It is a trial about the forests, not about the land. The people are asking him to pay more money for the trees that he has already cut. They won't let him cut fresh trees. For the trees he has already cut three years ago, he should pay more. He should pay at least ... before, he was paying two rupees per cubic-foot, now they are demanding more than 100 rupees per cubic-foot. (...) This is really hard for him, he simply can't do it. We are hoping that he drops the idea of cutting more trees.

JC: What happened with the money that he already paid? Did he pay to a Jirga-like system or did he pay to the families?

GN: Yes. He always paid it to the *muatabar(s)* (*mukhtars*). *Mukhtar(s)* are the responsible people of the village, it doesn't really mean the elders of the village, but whosoever was selected for this purpose. They get this money, they bring this money into the community. When there is a community gathering, they divide it. There are two ways of dividing the money: they divide by household or, most of the time, if we take into consideration religious reasons, they have to divide it person-wise. Actually, this is the real Islamic way of division.

JC: *I was told that they do it mostly householdwise.*

GN: The easiest way is to divide household-wise. If you do it person-wise, than women have less share, men have more share, children have less share and elders... It is more complicated, although there is more justice, because if there are twenty people in a house, they should get more. But, since it is a difficult task, people divide it by the household.

JC: *Does every house get an equal share or is there a hierarchy of families?*

GN: Well, if they divide it by household, then they give an equal share to every house. If they divide it by counting men or persons, then they do it accordingly. But not all (families) of the villagers are owners of the forests. Quite a lot of people who don't have rights to the forests do not get anything. They are called *gair zakim* which means unsettled outsiders. There is a big cotton sheet, you can call it a gazetteer, an old gazetteer. Only people who are mentioned in this gazetteer get a share.

JC: *How do you refer to this?*

GN: 'Chaddor' which means shawl. It is a white cotton sheet, so it is actually a shawl.

JC: *There is a similar system also in Astor which is run by the patwari(s).*

GN: We also have *patwari(s)* in Chilas. We are also a little afraid of mass tourism which can be dangerous for the ecology. For this reason we are trying to educate the people here so that we can have sustainable tourism.

JC: *I also discussed his ideas of tourism with your brother Rehmat Nabi. He told me that he does not like to have the same situation at Fairy Meadows as is in Kaghan, in Murree or other popular and often crowded places.*

GN: That is the main reason that we stopped this road. If this road was cleared, if it was again constructed up to Fairy Meadows, then there would have been the same mass tourism as in Kaghan because of its proximity to the Karakoram Highway. This place too would get overcrowded. So stopping the construction of this road was the best idea to keep tourism sustainable.

JC: *Who stopped this road? Was it the village people or was it the doing of nature, whereby parts of it were broken by landslides?*

GN: Previously I would say that it was nature. They completed this road by October 1991 and then there was the first snowfall, the people left for lower areas. In winter, most of the walls broke down because of landslides. So, the next year there was a ban

implemented by the government on the cutting of trees. Therefore, the contractors were not interested in constructing this road again. It was sheer luck that they did not turn up again and that now people have to walk. And because the walk is three hours, the tourist crowd is low. I think it is a good thing to keep this area as natural as it is.

JC: *What do you think about the intensity of tourism nowadays, is the number of tourists sustainable or is it already too much?*

GN: I won't say that it is too much, because it is not a small area, it is a big valley. Five hundred to one thousand tourists per year, I would say, is not a major (problem). This area can sustain up to 2,000 to 3,000 tourists a summer easily, if you do it with sustainable planning.

JC: *Have you ever heard any criticism of your camping grounds at Raikot Serai? Maybe that in some way you force people to pay for camping there.*

GN: Well, in fact, we don't force people to pay for camping. Whoever comes there, they are good people because they have to walk and they understand the nature of this area. I never heard anything like this from any tourists up there. Well, everywhere in the world, people pay for camping, it is an obvious thing.

JC: *When I visited Fairy Meadows once, there was a young British tourist who refused to pay any money and then he went into the forest to camp there free of cost.*

GN: Well, all over the world there are people like that. Even this summer, there were five young boys, they came up, and they refused to pay. They wanted to go further. I told them, o.k., if you don't have money, you can stay in my mass tent, you do not need to sleep outside at night.

JC: *So, you do not force anyone?*

GN: No, I don't force anyone who does not want to stay there! It is his own will. He also can go to the forest and stay there free of cost. Nobody forces anyone!

JC: *Were there some complaints from other families in the village? Maybe, that you offer camping facilities on your ground and that you earn the money and not them?*

GN: Yes, there were some and I would say it was professional jealousy and it has something to do with education. Now, they are realising that I have given them some business awareness. They used to fear that camping might reduce the number of loads because the tourists do not need to bring many things (up there). But now they realise that, by advertising, I have increased the number of tourists. They are catering to a bigger volume now. Before, hardly a group in a month would come. Now, with the advertisement and the facilities up there, lots of people are coming.

JC: *Yes, nearly every day tourists come.*

GN: Yes, now you must have seen this year that two or three more small camping sites are being prepared. It is not threatening for the villagers, as long as we keep it natural.

JC: *Is it true that more and more families are engaged in this business now ?*

GN: Everybody, even a young boy, if you open his pocket, may have a thousand or two thousand rupees. Which is just impossible in the Northern Areas.

JC: *Is there now unity in your village about this business ? Or are there still some families in opposition to this?*

GN: Well, there is a lot of opposition from some families. We tried to organise a porters' union this year. But it did not work, some people refused to join. But still, there is always a lottery or very fair justice by dividing the loads. It is very well organised. It is not that some people always get loads and some never. Everyone has equal rights. Except, there are some influential people or some intellectuals who quickly get the job of a guide. However, this has to do with education. If you have a better education, if you can speak English, you can do this job.

JC: *Do you hear complaints about the bad reputation that Tato people have, maybe in Gilgit or in other places. You also may have read about this in travel magazines or guide books that they (Tato people) take too much money; that they close up their valley and their business against other outsiders.*

GN: I think that it is a positive point to keep it (our valley) a little bit expensive or to close it for outsiders. It is a sign of better economical appraisal of the village. Because, if we simply let a jeep enter from Gilgit, usually all tourists come from Gilgit, everybody will bring a jeep directly from Gilgit, the locals who spend a lot of money on their own jeeps will not get any profit. They maintain this road themselves, so they also have the right to do this. I think, as long as they do not really bother someone. Charging a little bit more, indeed it is more expensive than in other parts of the Northern Areas, is a good thing for the sustainability of tourism. We are not in favour of mass tourism, we are in favour of sustainable tourism.

JC: *Again, concerning the bad reputation. In some older travel guides you might read "Beware of thieves in Tato! Is there such a problem?"*

GN: I also have read this many times in some books. However, what often happens is that it happened to one person and then it comes into the papers. Later hundreds of people read it and hundreds of people talk about this. Basically, it just happened to one person. It is an accident. Maybe, it was the carelessness of the particular person himself who left something outside the tent and a small child sees it and will try to play with it. Maybe that is the way a bad reputation came about. We always have a saying that bad news travel very quick.

JC: *Yes, journalists might tell you that 'good news is no news', only bad news counts! What about the land on Fairy Meadows? Once in Pakistan you told me, that Brig. Azlam Beg actually has bought a portion of land on Fairy Meadows and he is still the property owner.*

GN: Of course, he bought it from the locals and they have sold it. Legally, he is the owner of this property. But it can be stopped, there can be some agitation against it, there might be a trial in the court. Like in Hunza, he bought land from (individuals?)

Here, he bought land from the whole community and some from *mukhtar(s)*. And, it is very possible that we will succeed against him because it was sold only by a few people and not by the whole community.

JC: *So, you will go to court again?*

GN: Sure!

JC: *I also discussed this problem with your brother Rehmat Nabi and he told me that you are planning to collect money to buy this land back from him.*

GN: It is not that much money. Even I myself, I can pay for this. And even the community can afford to buy it back, because he has already taken too much from this village. On the other hand, if the young people simply stay together, nothing will happen, he can't really come here.

JC: *You do not fear that he will come here and build a hotel?*

GN: I don't really fear. I told him, that 'if you want to have a camp site or if you want to build some huts, you can! As long as you do not harm the ecology you can come. Legally, you have the right 'But if it comes to the point of the destruction of this area, we will stop you whatever it takes. The people are determined to stop such plans.

JC: *Do you think that Azlam Beg's sons are interested in this area? This summer, I noticed that the small 'Shangri La' at 'Rarkot Bridge' had been closed and the locals were running a small restaurant and tea shop.*

GN: They are very interested. The closing of the Shangri La happened because it is a very hot place and they have problems with water supply. On the other hand, it is not a big set up to keep open. It is just a transit station for tourists to leave luggage there. They only have four to five rooms. Azlam Beg's grandson was here this summer and I had a lengthy discussion with him. We had quite bitter arguments in the first half of the discussions but later on he understood (my point), because he has travelled around and was coming from Canada and he would like to keep this place as natural as possible.

JC: *What is the basic idea behind your NGO?*

GN: The basic idea of this NGO is to collect money for the underdeveloped areas to provide basic needs to the people like water sanitation, health services, and basic education. This was my main objective as well as providing them with a healthy atmosphere.

JC: *Is it confined to the villages of Tato, Gunnar Farm, and Gor?*

GN: No, it is the entire area of Diامر, its name is 'Diامر Development Foundation'. It has been registered in Islamabad and we can operate all over Pakistan. Basically, our first aim is to do some work in village areas, like Gorabad, Gunnar Farm or near Chilas. We already started a water sanitation project which was ... the donor was surprised that this project was done so quickly. They have put up 6,000 ft. of galvanised pipe in one month and a few days. They dug three feet down and sometimes they had problems with rocks also. The people really are in need of water. It is primarily drinking water, but

it is also supposed to be sufficient for the fields. It is quite big, almost three centimetres in diameter.

JC: *Who is the donor? Does the money come from Pakistan?*

GN: It is the Dutch Embassy! I was so surprised. I just submitted a few papers with some photographs. I knew someone in the development department and we just had one meeting. Next month, I was given the money. Generally, the Dutch are very flexible. With the Germans, you normally need political connections. I also did try to get money for the same project from the German Embassy. It took three months and then there was no answer. After this, I went to the Dutch Embassy and, in one month, they gave me the money. In the next month, I completed the project, which was also surprising for them.

JC: *Who did all the work, the villagers or a contractor?*

GN: Just the village people! No, we did not hire a contractor. The basic idea was to provide the villagers with the material needed. The rest of the job they were supposed to do themselves. We hadn't that much money to provide everything. And I think it is also a good idea to involve the community in this construction. We realised their responsibility [sic]. Well, if they keep it in a good condition, they will enjoy it in the future. If they do not maintain it, it is their own failure. They have to take care of this, it is their project!

JC: *Was there unity among the village community?*

GN: Before getting a donation, you have to organise the village. The first thing we did was to have an organisation from the village, a committee of five people. These people are responsible for this project.

JC: *Is the tap water now available to all the houses or is it confined to some particular houses?*

GN: Well, it is not meant for particular households. The village consists of about 25 households and this tap leads to a main tank right in the middle of the village. From there it is divided to three communal taps from where everybody is allowed to take water.

JC: *Did all houses donate some work for the construction of this project or were there some families who could not or did not cooperate?*

GN: Every house did! You know, normally one person out of a household was supposed to help, but there were even times when three men from one house came to work and help. They have wanted such a project for the last twenty years or so. Whenever there was an election, they were asking the politicians, 'if you can get water for us, we will vote for you!' Everybody promised this, but in fact nobody did it. This time they came to know that I do this type of work and some came to my home. I went up and I saw the situation. The women had to walk four miles in winter through the snow to fetch water. So I gave it a try. I did not really promise them. They were really in need of such a scheme.

JC: *Now, do you get more and more applications for such projects? Or was this a unique one?*

GN: Well, I was asked by the Dutch people only four weeks ago when I submitted my final report to them whether I have other projects or not. I told them, that I am going to Europe and I will come back to submit more projects.

JC: *Do you employ some staff for this or is it all done voluntarily?*

GN: We do this all alone. It is not a big job. We just make a report, a feasibility study. Well, in this NGO, we have some friends who are very big environmentalists who are doing a lot of big projects for the environment in our country. So, if I need any consultation, they do it for me.

JC: *And they do it voluntarily?*

GN: Yes, it is not a business, they do it totally voluntarily.

JC: *So, you have no permanent staff like the AKRSP?*

GN: No, AKRSP is a different thing. This is a big organisation, they have more money, they have a bigger infrastructure. So, I would say, they are doing less in development and are spending more on their own infrastructure. They are growing too big, they are paying high salaries and they are paying a lot of money for their cars, which we simply cannot afford to do. We prefer to spend the money for the communities than to develop our NGO.

JC: *However, when there are more and more applications from the villages, it might be necessary to have some staff, it might become too much for one person to handle?*

GN: Still, I think there are many other ways to get money and give it to the communities by making them responsible.

JC: *But I think that you also should implement some kind of control. If you divide so much money for so many different people, I think you should be sure whether there is really a positive impact.*

GN: Well, if it reaches a certain level or number of projects, there will be a need to hire people and implement some kind of control. But I think it won't be that much. Because it is a small area and if you involve communities you really don't need employees. Projects should belong to the communities and they need these things and they know how to manage them. For the next ten years, I am sure we won't grow so big, because to get donations is also a difficult job.

JC: *What do you think, what kind of projects are most necessary for the villages?*

GN: The first thing I would say is health problems [sic] which are directly concerned with water sanitation. If you give them clean water, there will be less health problems! So, water sanitation is one of the primary issues and the second is primary education. It is really important for the people. Education means awareness! Awareness about health and about environment.

JC: *So, you will go there and give some lectures or so?*

GN: We always do that, we always try to get in contact with the youth who are educated. Whenever there is a meeting, we try to explain to them what should be done or what should not be done. Now, more people are thinking because they simply need food, they demand a better way of life. If you talk of environment, they feel it is a crazy thing. So the first thing is, to provide them with something and then you can ask them to give something back.

JC: *Maybe you know Guy Duke from the 'Palas Project', he related to me exactly the same lesson based on his experiences in Kohistan. First of all, they introduced different economic incentives like better seeds, mineral fertilizers, or something else to prepare a basis for the people to get involved in the project's primary objective, the conservation of 'biodiversity'.*

GN: Yes, in order to get help or to get support from the village, you have to give them something. You simply can't go there and tell them to stop cutting trees. They need money for a better life. After giving them something, you can ask for the protection of nature. If you directly talk of nature, they simply won't listen.

JC: *I am also sure of this. Do you think that this 'Palas Project' is working well in Kohistan?*

GN: I think that it is, considering the situation there, it is a very successful project. You cannot expect such a good project in Kohistan where more people are illiterate and they simply don't have any awareness of the environment. That is one of the places where the timber felling originally started, you know? So it was a successful project. Although I do not know about it in detail, I am sure that implementing such projects in Kohistan is a major achievement, it is really a big achievement!

JC: *This summer, I was told, not only by the AKRSP people but especially by them, that politicians and people from Chilas are demanding the expansion of this project into Chilas. Would you welcome them also?*

GN: Yes, they should do this. I would welcome all these things from AKRSP. But simply there are a few religious groups who don't want this. Because they are frightened of the ... you know, there are rumours, that around the year 2000 they are going to convert the North into an Ismailian State. I do not know whether it is true or not. The fear is that, by means of the expansion of AKRSP's projects, they will carry out some kind of religious education. I do not believe it and I don't agree with it, but this is the reason why they are not allowed to come to Chilas.

JC: *I was told similar things in Astor also. But now, there are lots of people from Astor engaged and employed by this project. Already now, AKRSP is looking for staff from Chilas to be prepared for the possible expansion into this area. They want to train people in advance. I do not see such a threat of conversion, but I can understand that some people are afraid.*

GN: Yes, that is the main reason for this issue. Otherwise, I mean, it is not a religious issue. It is totally I would say, they have so many donations from the USA and other

countries. They (Chilasis) accept these projects and schemes but they do not accept the 'Agha Khan Foundation' because it might be a kind of missionary one, that is what they believe.

JC: *Suppose, AKRSP will actually start working in Chilas, do you fear some competition for you NGO?*

GN: Our NGO aims basically at providing good things to the communities. If someone else is also doing this, I would rather welcome it. It will be more quickly done than I can do it, so I would feel happy if more and more people come up with these things. It is not a private business, so I do not think there will be competition.

JC: *So, do you see a chance for cooperation or some kind of specialisation in development activities?*

GN: It is always welcome, if someone else comes. It has nothing to do with competition. We are not making money out of it, so there is no fear that AKRSP will take up everything. We are working on minor levels, they on superior levels. I can't think of being their competitor, if I can do my work and they can do theirs.

JC: *Concerning forests, as far as I know there is a ban since 1993 on the felling of trees. However, this summer we saw so many logs being brought down from the forests to the roads. What is going on there?*

GN: This year, they lifted the ban to pull out the previous trees for marketing.

JC: *Who is getting the money for these trees? Is it still Azlam Beg and his sons or is it the villagers from Tato earning money from marketing the trees brought down this summer?*

GN: Well, this forest is still on lease to him. Officially, it is still Azlam's property. He has to pay some money to the villagers, the 'royalties'. The rest is his money. The trial going on now is about the villagers demanding more royalties than he has paid before.

JC: *How long will this lease last?*

GN: Normally for twelve years, but the twelve years are over. But since the government implemented a ban in between, these three years go to his credit. It can be expanded.

JC: *What will happen when the lease is finished?*

GN: The forest will be handed over again to the village.

JC: *What are your plans for the forest in the near future? Will you exploit it the same way that Azlam Beg did?*

GN: We will conserve it, rather we will exploit it also, but in a different way, in such a way that the community gets benefits and nature is conserved. We have a lot of 'dead fallen' and 'dry standing' trees which can be removed and the economy can be up-raised very quickly, but not by cutting living trees.

JC: *However, did you make any calculations about whether these 'dead fallen' trees will be sufficient for domestic needs, for the construction of houses and so on?*

GN: We really have a lot of such trees. We will divide the forests. Some parts of it will be solely for the domestic needs of the people, from some parts they also may sell timber. Rather, we are thinking of keeping it for our own resources, for our own use. You might have heard that I have raised my voice to the owners of these forests in our region saying that they can sell their forests to me at a higher rate, more than double the price that they are demanding from Brigadier Azlam and I will not cut it! I will keep it! I told them to sell it to me for 50 years. This money is a million dollars. I think it is difficult but not impossible to collect this money. There are people who would give donations for such a beautiful forest. It is very difficult, but not impossible.

JC: *There are similar programmes run by Greenpeace and so on. They bought some land in Brazil to conserve the tropical rain forests. So, of course, this might be possible also in Pakistan.*

GN: Yes, I am already in close contact with IUCN (The World Conservation Union). They have given positive signals. There is another organisation, CNPP, Commission on National Parks and Protected Areas', another big NGO from Switzerland, they also wrote us a letter saying it would be possible to buy this forest. But first, we need a proper infrastructure.

JC: *Yes, I also wanted to ask you about the policy on National Parks and the situation in Fairy Meadows. If such a park were to be created for the Fairy Meadows area, do you fear that this will create restrictions for the local people?*

GN: Yes, we had a big village meeting about two years ago on the topic of National Parks. But then we realised that the government can implement stupid restrictions on practices which the locals have been enjoying for hundreds of years. They can't really stop it! So we thought that we should manage the forest ourselves in consideration of the natural rights of the people.

JC: *Did you find a consensus in the valley, in the villages?*

GN: We had a big talk and most refused to have the forests converted into a National Park with a lot of restrictions. So now we will make it a 'natural' National Park which means, let the locals continue to enjoy their rights. On the other hand, we will protect the forests and stop the exploitation of the forests.

JC: *And the management should be with the local people?*

GN: It should be within the community and not with higher ups who often are corrupt people.

JC: *I think that Khunjerab is a very bad example of a National Park.*

GN: Yes, it is no longer a natural park. Even after the implementation of this National Park, wild animals are being killed. Because the people who were supposed to be the game watchers, they themselves shoot wildlife.

JC: *By the way, do you know John Mock? He gave an excellent lecture on the policy of National Parks at the 'Hindu Kush Conference' in Chitral. He clearly pointed out that the management should be with the local people, because they know the local situation best and they want to have sustainable use of their environment.*

GN: Once when I was in Khunjerab, I was invited by a friend of mine, a forest officer. He offered me a meat dish and I asked him what kind of meat it was and he told me, well markhor! So I told him, well you are supposed to protect these animals! But he answered, well it is no problem to shoot one or two, there were supposed to be a lot of them. So I told him, if you kill one, another one will come and kill one and eventually everyone will come, and the problem will never stop.

JC: *Just one last question concerning the forests. Do you see the necessity and also the potential for planting forest trees or do you think that natural regeneration is sufficient?*

GN: There is a very high ratio of natural growth in our forests, you must have realised. However, there are some places where too much timber felling has already been carried out and where some erosion is taking place. I feel the need to plant some new trees in such places and we will do this in the next few years.

JC: *And what about grazing? When the trees are young, they often are eaten up by goats?*

GN: That is one reason why we can really not plant lots of trees. We can't simply cover it with wires or with some fence. But I think it will not be a major issue. Generally, we have natural forests all over here, and there will be very few places where we have to plant the trees and we can protect these. We will tell the shepherds not to go to those sides. The basic thing is the awareness of the people. Once they are aware of it, once they feel their responsibility, once they realise it, then there will be no problem.

JC: *I am quite optimistic about your case but sometimes I fear that this awareness will only come and grow when the forests are nearly gone! Then it might be too late. My experience in Astor is that people are still not aware because until now the forests are still abundant and the people keep on cutting trees. Maybe after 20 years the forests will be finished.*

GN: Yes, that's why we have already started with our work!

Annex 3

Photographic Depiction of Raikot Valley and Activities



Overview



Pristine Forests

ROAD DEGRADATION



Landslide across road



Erosion above road



Road repairs

DEFORESTATION

DEFORESTATION



Mobile sleeper bridge (*patrooh*)

LOGGING IN BLOCK 4C



Collection (*thal*) and transit area

DEFORESTATION



LOGGING IN BLOCK 4C



DEFORESTATION



SHAPING INTO SLEEPERS



Decaying logs

LAND-USE PRACTICES: AGRICULTURE



Terrace agriculture



Potato crops



Vegetables in enclosure

LAND-USE PRACTICES: AGRICULTURE



Irrigation channel in forest above Jut



Two kilometres down in Punjadori



Gravity flow grain mill (Chakki)

LAND-USE PRACTICES: LIVESTOCK MANAGEMENT



Alpine pasture below Jut



Alpine pasture at Beyal



Coexistence

LAND-USE PRACTICES: LIVESTOCK MANAGEMENT



Retaining gate



Too close for comfort



Raikot Serai community at war



Stop the cutting! No way, I need the money



My house, my mansion

MISCELLANEA



Raikot Serai: disposal of excreta



Go for it! Plenty more where these came from



Near Raikot Serai: provisions for tourists and locals

Annex 4

Monitoring Report on Fairy Meadows

Fairy Meadows: Forests at the Edge of Disaster (Shaheen Rafi Khan, Ghulam Nabi, Rizwan Afzal)

Fairy Meadows — a poetic name for a poetic place, bestowed by a poetic people. In the upper reaches of one of the remote valleys in the Northern Areas, Fairy Meadows, one of many pristine alpine pastures, lies cushioned serenely among majestic mountains and tall dark virgin forests. In spring, the meadows are a blaze of colour; a riot of wild flowers of every variety, stretching out as far as the eye can see. They delight weary trekkers who have braved the three hour long, 1,000 metre high climb to relax finally among the meadows and gaze in awe at the resplendent snow-clad Nanga Parbat and her no less formidable sisters. Catching their breath, their eyes descend from the scudding clouds which garland Nanga Parbat, move along the kilometre-wide Raikot Glacier, finally coming to rest at its base. On both sides of the glacier, dark green forests of pine, fir, juniper, and birch ascend onwards and upwards until they reach the limits of the snow line. At the glacier base, new forest growth crowds its grey retreat, demonstrating yet again the millennia old triumph of birth over death. In time, satiated with such splendour and, gaining new strength, the visitors venture out again among the many forest and mountain trails for new experiences.

But, Fairy Meadows is under a looming threat, yet another victim of the rapacious timber mafia which has cast its malign shadow over the entire valley. Holding the impoverished local community to ransom and coopting government line agencies with equal facility, its rape of the environment and its people is both a physical and metaphorical travesty. Vast forest tracts lie devastated, mountain slopes have been irreversibly destabilised through massive use of dynamite and, thanks to an exploitative contractual arrangement, the proud and simple mountain folk are hopelessly at odds with each other over the small pittance allowed to them as royalties. The inert and weather-beaten deodar, fir, and pine logs littering the Karakoram Highway will eventually find their way into the houses of the elite, transformed into panels, cabinets, cupboards, beds, and other hallmarks of status. Few will trace their connection to a remote and beautiful mountain valley on its way to becoming another disappearing legacy.

Fairy Meadows is located in the Raikot Valley, Diamer District. The valley can be reached by jeepable road, branching south off the Karakoram Highway and originating at the Raikot Bridge on the Indus Rivers approximately 80km south of Gilgit. Winding up along the contours of the mountain slopes, the road passes by the main settlement, Tato Village. It comes to a stop at Jhel, a smaller village from which the final ascent up to Fairy Meadows begins. Construction of this road began in 1983 and was completed five years later in 1988. It is a vital lifeline for the valley residents, facilitating communications and movement of supplies. Thanks to the road, the influx of tourists and trekkers has also picked up rapidly.

The resident population in the 20-kilometre long Raikot Valley consists of about 100 households, with an average household size of seven members. The main ethnic group is the *shin(s)* (99% of the population) with *shina* being the spoken language. Their

ancestral hold on the land, its forests, and water resources also gives them primary revenue rights from the exploitation of forest resources. The *shin(s)* preserve their hold over their ancestral property through extended kinship ties, with intermarriages across ethnic groups being strictly forbidden. The community is orthodox Sunni, which has come to dominate pre-Islamic beliefs and practices, such as shamanism and acts of worship connected with fairies and certain mythical animals. But the old myths linger, preserved through oral tradition and the medium of music; a source of entertainment for visitors on cold nights over a warm campfire.

The upper reaches of Raikot Valley have enormous trekking and mountaineering potentials. The International Centre for Integrated Mountain Development (ICIMOD) has classified it as a Himalayan Environment Resource (HER). HERs have unique attributes such as inaccessibility, diversity, and fragility. Inaccessibility allows the pristine and diverse quality of the mountain environment, with its forests, flora, and fauna, to survive in an undisturbed state. But the inherent geological instability, combined with high intensity use of mountain resources; mining of forests for timber and fuelwood; overgrazing on mountain slopes; and overburdening of sinks through poor sanitation practices, can easily disturb the fragile ecological balance, often giving rise to irreversible degradation. Increased rates of erosion, landslides, and loss of flora and fauna are examples of such degradation. In order to prevent this from happening, the mountain resource base must be used sustainably within the limits represented by its 'carrying capacity'. This is an all-encompassing concept; it means that the activities of the host and transient populations must contribute to maximising environmental, socioeconomic, and cultural benefits, without adverse impacts on its biophysical, socioeconomic, and cultural environment.

As is evident, neither the activities of the local community nor those of the tourists pose a threat to the sustainability of the valley's natural, economic, or cultural assets so far. In fact, their mutual interactions represent a healthy symbiosis, resulting in reduced pressure on the resource base, as well as in improvements in the socioeconomic welfare of the community. The marginalised population of Raikot Valley ekes out a bare subsistence from the mountains, which takes the form of terrace agriculture, livestock grazing, and dual use of forest wood for house construction and fuel. Clearly, the small size of the population, relative to the size of its resource base, i.e., forests, land, and water, limits the extent to which these resources can be exploited without causing lasting environmental damage.

Tourist interactions with the environment have also remained benign. In the first place, difficulty of access restricts the type of visitor to a particular type of person; one who welcomes a certain degree of physical hardship, is in tune with environmental issues, and is alert to the cultural sensitivities of the people. Second, the visitors have generated employment and income-earning opportunities for the community, through hiring porters and guides, use of local jeeps, and purchase of food and fuelwood, thus diversifying income sources and reducing pressure on the land. Third, induced support infrastructure, such as camping facilities, are basic and client appropriate; no expensive tourist resorts

are to be seen. Finally, the income potential stemming from the continued influx of tourists and trekkers can be expected to create greater awareness and concern with preserving the pristine quality of the mountain environment, in order to sustain and increase these inflows. Such synergisms represent sustainable mountain tourism development in a form which not only remains within the bounds of the area's carrying capacity but, in time, can improve it as well.

But the story, unfortunately, does not end here, as the inserts so vividly demonstrate. The manifest destruction of the forests and degradation of mountain slopes are further affirmation of our national afflictions — namely, greed, exploitation, and corruption. Such wanton acts, clearly, cannot be attributed to the indigenous community nor to the tourists, but to a much more malignant presence, namely, the timber mafia. Thereby hangs a sordid tale.

The forests are the communal property of the local population, to which they have legal and ancestral rights. Such rights were established during the pre-partition colonial era, under a system known as *bahr rajaki*. In return for use of labour services and pack animals to transport material and equipment to designated camps (*parao*), the British granted large tracts of land and forest to the tribes and clans providing these services. These liberal grants also established the basis for a hands-off style of self-governance which suited these proud and independent people and guaranteed payment of revenues (*maaliya*) to the colonial administration. The Bhutto government abolished the *numberdari* system in the early seventies. However, its replacement, the local government system, has provided few benefits to the mountain communities.

Nowhere is this neglect more evident than in Raikot Valley. The valley has one ill-equipped and under-staffed primary school; the local dispensary can barely deal with first aid cases; there are no water supply facilities; and repeated requests from the community to construct an access road or to repair irrigation channels have met with typical bureaucratic apathy. The locals continued to lead a bare subsistence existence without the means or knowhow to exploit their forest wealth.

In 1983, a retired officer and entrepreneur par excellence spotted the immense revenue potential of the forests — and also noted the economically distressed condition of the community. He offered to construct an access road up the valley, in return for a contract allowing him to cut up to 20,000 thousand trees in six designated valley blocks over a ten-year period. The locals accepted with alacrity. Not only did this mean a desperately-needed road would be provided but an additional sweetener was provided as well; for every square foot of timber extracted, Rs 2.50 was guaranteed in the form of royalty to be distributed among the community. A more detached observer would have noted that the road was being constructed primarily to facilitate transport of timber through otherwise inaccessible terrain. Also, the royalty was a fraction of what the timber would fetch at down-country sales.

To this officer's credit, he continues to be respected by the local community. Although extracting his pound of flesh, he also understood what the forests represented and the value of controlled cutting. In strict compliance with forest department regulations, only those trees were cut which were marked as mature, top dry, dead standing, diseased or in congested lots. The timber was guided down with ropes to protect standing trees, and fallen branches and debris cleared to allow regeneration to take place. By the time the road was completed in 1988, 5,000 trees had been cut from two blocks or compartments. On the modest assumption that an average tree yields 50 square feet of usable timber and that the market rate then was Rs 100 per square foot, the contract turned out to be an extremely lucrative proposition. Of the gross revenues of Rs 25 million, the community was paid Rs 7.5 hundred thousand with an equal amount going to the forestry department as fees. Furthermore, about five tons of dynamite were used in blasting the road. This has caused extensive fissuring in the rocks which is constantly enlarged through alternate cooling and heating. The process has become a source of frequent landslides which block the access road and require expensive and repeated repairs.

In 1988, when the officer ceased supervising activities, a critical turning point for the forests was reached. It unleashed a chain of events that has spelled large-scale destruction and which the inserts have attempted to portray. As timber prices soared and the community became aware of the one-sided terms of the contract, they began to agitate for better terms. At the same time, managed harvesting of timber began to be replaced by indiscriminate deforestation. Growing collusion with the forest department staff and, regrettably, with some locals, led to marking of fresh and under-age trees, as well as cutting of unmarked trees. By 1992, an additional 2,000 trees had been levelled in Block 4, the largest of the six designated compartments. This is a forest 3.5 kilometres long and one kilometre wide, extending from Fairy Meadows up to Beyer Camp at the base of Nanga Parbat.

Alerted to the impending disaster, the Moeen Qureshi government imposed a ban on cutting trees in 1992. Fed up with an increasingly strident local population and faced with a probable loss in income, the officer's son sold out the remaining portion of his contract to a timber lord from Dir. The ban notwithstanding, deforestation activities have continued apace. In 1995, the terms of the contract were renegotiated with the community; their combined royalties and returns were increased to Rs 50 per square foot. But timber prices also went up in the meantime, to Rs 300 per square foot. A rough calculation suggests that the remaining 15,000 trees will gross anywhere in the region of Rs 225 million. Of this, approximately Rs 45 million constitute royalties and Forest Department fees. Returns of this magnitude are more than a sufficient reason to engender violations of the ban with the associated penalties, amounting to a few hundred thousand rupees, proving to be an ineffective deterrent.

The authors went up to Fairy Meadows in mid-July to evaluate the latest situation. There, they found fresh evidence of extensive contractor activity. They were informed that anywhere from 500 - 1,000 fresh trees had been cut in Block 4 during the winter

in continued violation of the ban and at a time when weather conditions made monitoring difficult. Visual inspection revealed a two kilometre long and a half kilometre wide swathe of destruction. The trees cut and accumulated since 1992 had not been removed, with many in an advanced state of decay. Freshly cut trees were being shaped into sleepers, while dead standing and bottom burnt trees continued to remain bleakly upright. Many tree stumps did not bear the required Forest Department mark and number. Debris, fallen branches, and other detritus littered the ground, preventing regeneration and threatening to block off the villagers' main irrigation channel. The Deputy Director of ICIMOD, who accompanied the authors, was horrified at the devastation, remarking that he had seen nothing like it before in his experience.

The work is being carried out by imported labour from Dir. This labour is also being used to repair the road which has been undergoing severe erosion since early May, blocking all access to the valley and causing a serious setback to tourist traffic. While the primary purpose of these repairs is self-evident, the community is in no mood to ask questions, given the tangible benefits that this road represents for them.

The community is becoming increasingly fractious and turning upon itself, thanks to the machinations of the contractor. While a few informed activists are putting up a brave rearguard action to stem the rot, they are pitted against the bulk of the community. One cannot blame them. Neglected by the government, their income from tourists is at stake and, tempted by prospects of higher royalties, they cannot be expected to forego immediate financial benefits in the interests of long-term environmental gains. It will take time and education to persuade them that, if the present exploitation of forests continues, it will deplete their stock of natural capital and, eventually, discourage tourists from visiting the area. In the mean time, the contractor continues to exacerbate and feed upon their divisiveness.

Clearly, two radical and expensive solutions are called for which would break this vicious nexus of dependence upon the contractor. First, either the government or a donor agency should undertake lasting repairs on the access road. This means biological and engineering measures without the use of dynamite, e.g., checkdams, protection walls, drainage, and planting of fast-growing grasses and shrubs on the degraded mountain slopes. The appropriate technologies could be readily supplied by institutions such as ICIMOD. Once the road is stabilised, subsequent repairs and maintenance can be carried out by the community.

The second solution calls for an adequate financial incentive to the community to substitute for revenues from the contractor, as well as arrangements to remove dead wood from the forest base. The objective should be to convert Block 4 into a community park. The compensation mechanism should be such that payments are linked to demonstrated commitment by the community to protect the forest. The community would — under written contract — retain its rights to timber for house construction and fuelwood, and periodic controlled harvests would be allowed under community supervision and at royalty rates determined by them.

While these are the key actions required to marginalise the contractor's influence, other sectoral interventions are also critically needed. These consist of: a) physical and social infrastructure (irrigation channels, water supply schemes, school improvements, and a general as well as maternal and child health clinic); b) agricultural extension advice — for instance, Raikot Valley grows virus free potatoes and can be developed into a national seed source; and c) development of the tourism potential of the valley through technical and management improvements. In particular, Raikot Valley should not be allowed to develop into another Naran or Kalam, dotted with pagoda-like concrete structures, catering to an affluent and lazy class of tourists and providing employment and revenue for non-valley residents.

Nature's beauty is finite and Fairy Meadows is one of its national, indeed global, endowments. It is high time the government and/or an outside donor woke up to the grim possibility of its irrevocable loss and did something about it.

Members of

Annex 5

Zauti Members



Members of the Zauti

Members

Fazal Khan
Abbas Khan
Taimur Khan
Ahmed Ali
Mantaas

Families

Nagirai
Raeesai
Hajjatai
Loainh
Mujetai