Restoration of the Nemla Garden
(Interior Irrigation system)

Nemla Village / Khugyani District
Nangarhar Province / Afghanistan

Funded: FAO
Implementer: MARUF
Prepared by: Architect A. Hasib Latify
Director (MARUF)

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U.P.O.Box 1472, Peshawar, Pakistan. Phone No. 92-0521-843618

January, 1995, Peshawar
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A Thought for Bagh-i-Nimla
A. R. Fitzherbert
Programme Coordinator
Rehabilitation of Agriculture
in Eastern and South Western Afghanistan

It has been a great privilege for myself as the Programme Coordinator of the Food and Agriculture Organisation of the United Nations Rehabilitation Programme in Eastern Afghanistan to have been placed in a position to assist with the restoration of the irrigation and decorative waterworks of this fine unspoilt Afghan example of an early VII century Moghul garden of which very few remain. Remarkably it has somehow survived the many vicissitudes of Afghanistan’s turbulent history and must remain a symbol of her resistance in adversity. I first visited the Bagh-i-Nimla in the early spring of 1991 as a member of a small joint UN mission. We slept in the moon lit garden, awaking to the dawn chorus of a multitude of birds.

It will remain one of my most pleasant memories of Afghanistan.

The magnificent avenues of ancient cypress trees, the beds of narcissus and most important of all the fact that all this has been preserved virtually intact through all these tragic years of conflict entirely as the result of the loving care and protection provided by the people and community leaders of Nangarhar province, are manifestations in themselves of hope in the future and the continuity of life.

On every occasion since 1991 when I have visited the garden on mission round Nangarhar province the local people have begged us to help restore the beautiful water works which also supply the irrigation for the garden. Fortunately in 1994 this was possible, thanks to funding provided to FAO by the German Government through the office of the United Nations Office for the Coordination of Humanitarian Affairs - UNOCHA. When once again we were requested to help we were in a position to do so, as well as to provide support to the production of fruit and forest trees so badly needed by the local communities and which had always been part of the garden’s activities, currently being supported through the FAO’s UNDP funded project.

The result has if anything exceeded all our expectations. We wish all Afghans who pass that way very many pleasant hours of peace and tranquillity in the shade of those ancient trees, that have seen so much history, with the sound of the water in their ears. May it stand a symbol of happier times for the future than have been their experience for many years.

Many thanks and congratulations are due to the Afghan engineers responsible for the completion of this work, that of the implementing architectural engineers - MARUF supported by those in the FAO’s engineering project office. It can with truth be said to have been a work undertaken entirely by Afghans.
Dear Engineer Latify,

The 29th of January 1995 was a memorable day. It is fashionable these days to complain that a billion dollars have been spent on projects inside Afghanistan, yet there is nothing to show for it. Although one knows that this is not true, it becomes very disheartening to sit in Peshawar and hear this repeated over and over.

It was an exciting experience, therefore, to travel to Nemla Garden to see such a dramatic refutation of the gloomy charges.

To begin with, the survival in good health of the almost 400-year-old cypress and chinar trees corrects our perspective on reality. As distressing as the current evidence of man's predilection to destroy may be, Nemla Garden proudly proclaims Afghanistan's creative heritage. The care with which the garden is being maintained, and, MARUF's conception to restore its channels so that the fountains and waterfalls might once again add their exuberant charm, testify to the fact that this heritage still lives.

Sincere appreciation is due also to FAO for their practical support of this initiative, linking it with their efforts in the reconstruction of the environment.

Frankly, I was unprepared for the majestic elegance of the restored water system. During the 1960s and 70s, the water was not flowing and the works were largely hidden in the undergrowth. Today the vista is stunning. The care MARUF has taken to restore the natural engineering concepts employed by the original architects is impressive.

Lastly, as I have written elsewhere, Afghans cherish gardens as their favourite venue for entertainment. It was fitting, therefore, to dine sumptuously on a mound once a pleasure pavilion overlooking a beautiful panorama.

The ruins of the twice-bombed rest house built by Amir Habibullah early in the twentieth century provide the only jarring note. Characteristic of buildings popular on the Indian subcontinent at that time, this verandahed bungalow is an early example of the first western styles of architecture introduced to Afghanistan. There were originally seven rest houses along the route from Jalalabad to Kabul. As far as I am aware all the others have completely vanished. In 1978 only one other fine example of this style still existed, in Paghman. I do not know if it survives, but the restoration of the Nemla bungalow would be important to the history of Afghan architecture.

Congratulations on a project skillfully completed.

Sincerely,

[Signature]
FOREWORD:

This report is a general view of the Nemla garden (one of the Moghul gardens of Afghanistan), before restoration of the interior irrigation system, and the restoration of the interior irrigation system after that.

This report is the result of collected information, together with photos received during the restoration process and after the successful completion of the project.

Completion of this report is a step towards encouraging the concerned departments and people towards preventing further cultural disaster of Afghanistan.

* Interviews with old villagers
ACKNOWLEDGEMENTS:

During the last few years since rehabilitation activities of Afghanistan were started in different fields of life, MARUF also got a project, which was the restoration of the Nemla Garden.

This project was based on the efforts of the local commander, Haji Mohammed Hashem, known as (Malem Hashem).

The support of the FAO Coordinator Mr. Anthony Fitzherbert, FAO consultant Mr. Anderson, their team members Engineer M.Q. Naimi, Engineer Zia, Sayed Sharif and Mr. Hussain, is highly appreciated and I am thankful to them.

I am thanking Mr. Tahseen Gailani of UNILOG for the shipment of the goods related to the project, from Peshawar.

Thanking Mrs. Nancy Hutch Dupree Senior Consultant ARIC/ACBAR, and Mr. Jolyon Leslie Chief Technical Advisor Habitat (UNCHS), who provided lots of useful needed information.

I am thanking the Nangarhar authorities, who facilitated the process of the removal of trees planted later which now had badly affected the view.

Thanks to Mr. Sayed Hakeem the chief gardener of the Nemla garden who provided fruitful information regarding Nemla garden.
Thanking ACLU staff who were too much cooperative, during our project implementation phase.

At last I am proud of the MARUF team for their successful completion of the project, especially Engineer Rochullah, Engineer Sayed Rasoul and Rahmatullah (foreman).

Thank you.

Architect: Hasib Latify
Director (MARUF)
Peshawar January, 1995

1. ACLU staff who are stationed at the garden
INTRODUCTION:

Nemla is a sub districts of Nangarhar Province, located in Khugyani at the distance of 37 km (26 miles) on the old road towards Kabul, from Jalalabad.

The only Moghul garden in Afghanistan retaining any of it's original appearances is the garden at Nemla.

Local lore credits Nur Jahan, wife of emperor Jahangir, who was renowned for her gardens, with it's creation.

In his memories the emperor speaks of creating the Jahan Ara (World Adorning) garden in Kabul of Afghanistan in 1607 AD, but makes no mention of a garden at Nemla, although he describes a garden hunt in it's vicinity on their way back to India.

Architectural details suggest a date between the end of the 16th and the beginning of the 17th centuries.
A VIEW OF AJEMLA GARDEN
(BIRD EYE VIEW)
BACKGROUND:

The enclosed garden is 130321 m² equal to 65 jereeb, and contains many classical Mughul elements including an orderly grid pattern of interesting walkways lined with cypress interspersed with poplar and fruit trees. All of them reach to a height of more than 100 feet. The walks which they shade are too lovely. One waterfall is honey-combed, with deep niches in which candles were placed behind the cascade.

A favorite detail of the period, the banglow at the center was built by Amir Habibullah (1901 AD). This building inside the garden is destroyed. It consist of two bed rooms with attached baths, two sitting rooms, with small side rooms and a veranda on three sides, except on the west, which was the entrance to the bungalow.

This building was restored by the efforts of the Local Commander Mr. Abdul Haq, and just few month before the failure of the Government in Jalalabad, it was bombed for the second time.

This building which was roofed with corrugated iron sheets (the halls parts) and flat roofs for the bed rooms and side rooms, was constructed will constructed.

To the western side of the garden two annexes were built for the purpose of kitchen and storage, which still exist, but require repairs.

The boundary wall of the garden which was made of mass clay (Pakhsa), had twelve layers, but during the governorship of Mr. Ghulam Farooq four layers were demolished, and the remaining eight layers are in two bad condition now, and require heavy repairs.

Beside that, during the governorship of Mr. Ghulam Farooq trees were planted on both sides of the main channel and central pool, which have cracked the edges of the channel and the pool.

On the top of the wall there are stone plates coated with mud, which were decorated with small river stones.
There were two entrances to the garden, which still exist, without gates, and the side columns require repair.

Based on historic resources, Nemla garden in Nangarhar province, and Babur's garden in Guzar Gah village of the Kabul province of Afghanistan were built at the same time, and that is because of their architectural form and function.

Fountains at the middle of the pools in both of the gardens have the same shape. Where as the fountains of the Nemla garden are almost destroyed, in Babur's garden the style exists.

The intake of the fountain in Nemla garden is from a sloped side of the hill to the south of the garden at a distance of about 800m.

This water is directed to the fountain at the central part of the pool of the garden in a concealed system.

The present situation of the garden according to the observations of the survey team was really miserable.

Foot paths, waterfalls, ramps on the sides of the waterfalls, niches (for candles), decorative columns, water channel, under ground supply line (for the fountain), the fountain itself, the semi-circular places for the flower boxes, surface drains inside the garden and the intake pond outside the garden, were in too bad condition, and required restoration.

The condition of the flowers and trees are improving, due to the efforts of one of the Afghan NGO's named Koh-i-Noor Foundation, with the support of FAO, which is appreciated.
A bird eye view of the Nemla Garden
A bird eye view of the Nemla Garden
VIEWS FROM SHALAMAR GARDEN
LAHORE/PAKISTAN.
NEMLA GARDEN
INTERIOR IRRIGATION SYSTEM

PROCESS OF RESTORATION:

Supply Line:
This line started from the road side to the southern part of the garden at a difference of elevation of 6m, and coming down under the agricultural fields to the central pool for feeding the fountain, with a length of 473m.

According to the technical survey documents¹, layout and then excavation took place. After completion of excavations and removal of the old pipes², a base was constructed for laying the new PVC pipes. By laying the pipes as per calculated slope, it was covered as per specifications given³, then the top was filled with ordinary mud.

The same procedure was followed for the supply line inside the garden, under the main water channel.

Inlets and outlets of the garden were also built according to the specifications, with RCC pipes and sides with brick masonry, coated with cement and sand plaster.

Intake of the supply line which was outside the garden was also restored as per specifications given.

1 Technical survey document by MARUF
2 Old pipes of the supply line were ceramic pipes
3 Technical Survey Document by MARUF
LEGEND:
A. Project starting point (intake pond)
B. Starting of the Garden area
C. Fountain Location (med point of the channel)

Key plan of the Nemla Garden
Layout plan of the Nemla Garden
Views the main supply line under repair in the agricultural lands.
Views the main supply line under repair in the agricultural lands.
Inlet control point of the outer reservoir to the main supply of fountain outside the garden
Construction of the Covered drains
Sides in the garden
Construction of the road sides at the edges of the Covered drain lines in the garden
Views the main supply line under repair in the agricultural lands
Views the main supply line under repair in the agricultural lands
Waterfalls:

There were six waterfalls which were in too bad condition, and of different designs of ribbed form on different directions as follows:

Four of them were along the main channel, and two others were on the south-east side of the main channel. The designs of each one was different. According to the specifications and measurements given in the survey document, for each one of the waterfalls, separate molds were made and restored accordingly, with the addition of an electric system (instead of the old candles system).

Wiring was concealed and bulbs fixed in such a way that it is waterproof.
Details of niches for candles

SECTION (AA)
Details of the Top & Bottom of the Waterfalls
Cross section for one of the waterfalls of the Nemla garden

SECTION AA
Floor Plan of the waterfalls of the Newla garden
Showing the foot paths, green belt, flower boxes and water channels as symmetrical design concept
Projected view of the niches for candles
Construction material are burnt bricks in cemented materials for mortar and hollow blocks of the niches
Views show one of the waterfalls in both conditions of before and after restoration.
Views show one of the waterfalls in both conditions of before and after restoration.
Views show one of the waterfalls in both conditions of before and after restoration.
Views show one of the waterfalls in both conditions of before and after restoration.
Detail of the stream leading water to the pool.

Scale 1:20

One can see the flower box at the four corners of the pool. (Refer to photo.)
Views of the fountain (before and after restoration)
Views of the waterfall after restoration
Views of the waterfall aside from the main channel
(before and after restoration)
VIEWS FROM SIDE WATERFALLS
Views of the fountain (before and after restoration)
Process of restoration of the Fountain at the end point of the channel
Process of restoration of the Fountain at med point of the channel. Top cover items of the base storage of the fountain is shown in the photos.
Process of restoration of the fountain at end point of the channel. Top cover items of the base storage of the fountain is shown in the photos.
Process of restoration of the Fountain at med point of the channel. Top cover items of the base storage of the fountain is shown in the photos.
Views of the fountain (upper) and waterfall (lower) after restoration
Water Channel:

Water channel with a depth of 0.6m, width of 3.25m and a length of 292m, required the following activities for restoration:

- Cleaning of the base material which was collected due to the lack of cleaning during the last fifteen years.
- Repair of the channel sides with burnt bricks supplied from Jalalabad, with cement sand mortar, and plaster of the mentioned parts with cement sand.
- Filling base for laying Chowka bricks4 tipped with cement and sand mix.
- Repair of the water stoppers in the channel, also took place according to the document.

4 Chowka is large size of bricks (30x15x5)cm
Channel edges, before and after restoration
Details of the Daka or speed breaker in water channel of the Nemla garden
Views from the channel
(during and after restoration)
Perspective views from the channel
(during and after restoration)
Floor finishing of the channel with Brick Chowka
(large and thin size of Burnt brick)
The photos are from the completed channel base brick tiles with the water stoper and channel sides finished works.
The photos are from the completed channel base brick tiles with the water stopper and channel sides finished works.
Views from the lower part of the channel
During and after restoration
Ramps:

Ramps on the sides of the waterfalls, with brick work at the sides and river stone on the surface required restoration.

Brick work was with burnt bricks in cement sand mix and the river stone fixing was on the mud, which was followed and achieved.
Photos show repairing of the ramps on the sides of the channels, and the decorative columns on the sides of the ramps.
Views show the ramps under and after restoration
Views show the ramps under and after restoration.
Decorative Columns:

Decorative columns at the lower and upper sides of the ramps made of burnt bricks in cement sand mortar.

One point which came late to our attention, was the actual design of the columns. The column which was lying at the side of the channel and was accepted as a sample for restoration was not the first design, but a reformed shape utilized during the Reign of Amir Habibullah. The actual form of the column had a square shape, and was standing on four legs, not as it was seen and proposed in the technical survey document, as a solid hexagon.

Another additional work in the columns was the electric system, because it did not exist before when, only candles were placed in it.

5 The actual shape of the column, before restoration during the Kingdom of Amir Habibullah
Decorative elements as small towers on both sides of the roads, which are destroyed except one laying at a side, shown in the drawings.
Decorative elements as small towers on both sides of the roads, which are all destroyed except one laying at a side, shown in the photos.
Restoration going on decorative columns on the sides of ramps
Views from decorative columns
Semi Circular points For flower boxes:

On each side of the waterfalls on the main channel one of these circular stepped places existed.

These points were destroyed in such a way that only a few points adjoining the wall were visible.

These were restored with burnt bricks in cement sand mortar, and a garden light which was part of the additions made during the Reign of Amir Habibullah.
Semi-circular points for flower boxes on the sides of the waterfalls (before and after restoration).

Plan and section of the step for laying flower boxes on it in Nemla garden.
Views of the Semi circular points for flower and the waterfall (before and after restoration)
Process of restoration of the semi-circular points for flower boxes on the sides of the channel.
Photos from the finished flower boxes, channel sides and upper part of the niches of the waterfalls
River stone decorated surface:

On both sides along with the main water channel, with a width of 0.6m river stone decoration had taken before, which was restored.

These stone pieces were fixed with soft mud in to the ground.

Borders for these stone layers are channel edge from one side and a row of the stand shape of the river stones.
One side of the foot path decoration by black and white river stones, which is shown in photo and detail drawing.
Photos from the river stone decorated surfaces on the range.
Photos from the river stone decorated surfaces on the ramps.
Photos from the river stones decorated surfaces on the sides of the channel.
Note:
Due to the lack of information about Nemla garden, it was difficult to collect information regarding the garden, but during the implementation stage, we continued to search and collect information.

The sources of information were mainly the old people of the village.

The points were received later are as follows:

1. Trees at the sides of the channel and pool were not part of the actual design of the garden, so they are taken out.
2. The columns were not in the shape found during the technical survey. The Restoration is explained above.
3. Four layers of the boundary walls were taken off, but we could not touch it due to budget limitations.
4. Grills at the sides of the ramps, between the columns, were left as they were, due to budget limitations.

Removal of the Trees:
Removal of the trees which were added to the ornament of the garden, at the latest 30 years ago, which badly affected the main view, with the consultation of the Nangarhar authorities, and the agricultural department of Nangarhar province.
Photos from a part of the channel base and the channel sides with the removed trees (which were not part of the actual design of the garden, and were planted later)
Views from the completed (restored) form of the Nemla garden
Hand overing day ceremony of the restored interior irrigation system of the Nemla garden
Views from the completed (restored) form of the Nemla garden
Perspective views from the lower and upper parts of the channel During and after restoration
RECOMMENDATIONS:

Restoration of the Nemla as an historic garden is looking to the problems of Afghanistan from another angle, which is preservation of the cultural heritage of Afghanistan.

As normal infrastructure it does not look as priorities, but if we look at the root of the case, it should be considered as one of the priorities, because this the base of the culture and history of the country, and it can be considered as historic evidence not only in Afghanistan, but everywhere.

So MARUF by having the following two steps towards restoration of the Nemla garden:

1. Restoration of the Water supply system to the channel, which has cascades and fountain, with the support of FAO, which is completed.

2. Restoration of the Bungalow in the garden and the feeder canal of the Channel of the Nemla Garden, which is recently recommended by Habitat and funded by WFP.

Besides of the above points, Nemla garden is the station point for the agencies going towards Sherzad district, Resarak District and going ahead to Kabul and Logar provinces on the old Kabul Jalalabad road.

Based on the above justifications, We are bringing to the kind notice of the interested concerned agencies, bodies and authorities that:

Boundary walls and two gates of the garden which are one of the important elements, at the moment walls are in too bad condition and gates do not exist.

If it is not restored the privacy and protection of the garden's trees, flowers, nurseries, cascades and other related items from village animals will not exist.
BUNGALOW
(Nesla Garden)
The Bungalow inside the Nemla garden after restoration, just before the bombardment.
North-east corner Perspective of Castle in Noorâ Garden
Constructed during the Kingdom of Amir Habibullah Khan
Views from the bombed condition of the Bungalow inside the Nemla Garden
Views from the restored Bungalow inside the Nemla garden after the last bombardment in 1992
Eastern side ruined view of the Castle in Nemla garden
Views of the annexes on the west side of the Bungalow inside the Nemla Garden
FEEDER CANAL
(of the Channels)
Photos show the present condition of the feeder canal to the Hemla Garden.
Photos show the present condition of the feeder canal to the Nemla Garden, which requires bank protectors.
BOUNDARY WALLS
(Nemla Garden)
Views of the existing boundary wall of
the Nemla Garden (which was 8 layers of mass clay
60cm high each)
Views of the existing boundary wall of the Nemla Garden (which was 8 layers of mass clay 60cm high each)
Views of the existing boundary wall of the Nemla Garden (which was 8 layers of mass clay 60cm high each)
Views from the bombed condition of the Bungalow inside the Nemla Garden
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Eastern side ruined view of the Castle in Nemla garden
Views of the annexes on the west side of the Bungalow inside the Nemla Garden
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Photos show the present condition of the feeder canal to the Mela Garden, which requires bank protectors.
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Views of the existing boundary wall of the Nemla Garden (which was 8 layers of mass clay 60cm high each)
Views of the existing boundary wall of
the Nemla Garden (which was 8 layers of mass clay
60cm high each)
Views from the trees in the Nemla garden planted recently.

Old trees with damaged trunks, which are repaired with burnt bricks in cemented plaster for making it as complete tree trunk.
Production of the slabs for covering the drains
Work in progress
(Preparation of mix and carrying of RCC pipes into the working site)
Work in progress
(supply of construction raw material)
Summary sheet of the nemla garden
Rehabilitation:
* If channel base is paved with Chowka bricks and plain concrete:

**FAO costs:**

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Sub total ............ Rs 555200
Contingencies 10% Rs 55520
FAO TOTAL COSTS........ Rs 610720

**NGO COSTS:**

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NGO Total Costs........ Rs 403440

PROJECT TOTAL COSTS (FAO + NGO) ............ Rs 1014160
Multi Activity Rural Rehabilitation Foundation (MARUF) Work Plan

Project: Nemla Garden, District: Khugyani Province: Nangarhar.

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**Multi Activity Rural Rehabilitation Foundation (MARUF) work plan**


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Pl: Plan
A: Achievement
W: Week
b: form.pla
To The Director MARUF
Asalam Alaikum:

Reference to your letter, about the interest of your organization for rehabilitation of the Nemla garden structures and irrigation systems.

Khugyani Administration is appreciating your work and welcoming you, and assure for all type of the assistance, and help required from as.

Thanking you

General Kamal Ud din
Security in charge
دست‌نویس و لايت
نمبرهی دخوکیانیو و لسوالي
دامنهای قوماندانی

(سکندر کریمی)

فرماندار روستای بی‌نام

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Dear Brother Engineer Abdul Hasib Latify
Asalam Alaikum:

It is known that 14 years of war destroyed the country, therefore Nemla people are requesting you, for rehabilitation of the canals and intakes of the Nemla.

It will solve the problem of the local people of the area, and help in reduction of Poppy cultivation at the area.

Wishing you best health

Elders of the Nemla

Malik Sour Gul
Farooq Qalander
Gul Jan
Lal Gul
Abdul Rahman
Mir Zaman
Haji Taj Gul
Abdul Nabi
Raza Khan
Ghulam Hassan
Khairullah
COMMUNITY AGREEMENT

Standard Statement to be made by the Council or Elders of the Project Recipient Area and included as an Annex to the Project Document

We, the Shoora (or elders if there is no Shoora) of (name of the villages and sub-districts represented) of (name of the district) district of (name of the province) Province of Afghanistan, accept (the name of the project) to be implemented by (the name of the Implementing Partner) on behalf of (the name of the funding/executing UN agency).

We agree to provide security for the staff of the Implementing Partner (the name of the Implementing Partner), United Nations personnel and their property.

We recognize the adverse impact of poppy cultivation, narcotics manufacture and trafficking and drug abuse on the moral and social fabric of our community. We confirm our commitment to drug control. We also confirm that we will prevent the project from resulting in opium poppy and cannabis cultivation and in this connection undertake to cooperate with all UN agencies in their activities against processing, trafficking and abuse of drugs.

We understand that United Nations assistance will be halted if it becomes evident that the project benefits opium poppy cultivation.

March 93/Nov. May 93.
Engineer A. Hasib Latify  
Director  
Multi Activity Rural Rehabilitation Foundation (MARUF)  
Street No.11, Shaheen Town, Jamal Road  
U.P.O. Box 1472  
Peshawar  

Dear Eng. Latify,  

Subject: Rehabilitation of the Nemla Garden's in Khogiani  

Thank you for your letter No.003/undcp/94 of 26th October 1994.  

While this office has no difficulty supporting a project relating to rehabilitation of Nemla Gardens, which is a historic national garden, we are unable to support protection work to the Nemla main canal which is feeding agricultural land where opium poppy cultivation levels were this year unacceptably high.  

The United Nations is facing an increasingly difficult funding situation as a result of which it has seriously to consider the values of funding rehabilitation activities in areas where opium poppy cultivation levels are excessive or where the community have made an effort to reduce levels of illicit crop cultivation.  

Kind regards,  

Andrew S. Pryce  
Chief Technical Adviser  
UNDCP/ADCRP, Peshawar
Views from the Shalimar Garden in Lahore of Pakistan, which is of the same concept of the Nemla Garden design in Nangarhar of Afghanistan.
VIEWS FROM SHAHUMAR GARDEN
LAHORE / PAKISTAN.
VIEWS FROM NICHEs IN
SHALMAAR GARDEN, LAHOR
BIBLIOGRAPHY:

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  By Nancy H. Dupree

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  By Albert Szabo and Thomas J. Barfield
  university of Texas press Austin (1991)

- Nangarhar province
  UNHCR Background report

- Salam Gazette of UNOCHA 1991

- Nemla Garden
  A technical survey
  By. Architecture A. Hasib Latify
  Peshawar, 1994

- Photos from MARUF album