

Transforming Patan's Cultural Heritage into Sustainable Future

Case Studies of the Past and the Present

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Introduction:

Abstract:

The paper takes theoretical basis of sustainability and sustainable cities as well as urban culture as basic departures. Urban sustainability and its concept are by necessity limited by the knowledge and foresight of a society. Since urban decay is a function of the failure of either the supporting capacity of resources or the assimilative capacity for waste or urban poverty and heterogeneity, for sustainability, urban systems have to be able to strike an equitable balance between resource utilization, waste absorption and social harmony across time through several generations, across space to rural areas and across citizen group or social strata. It theoretically models 'urban culture' as a triangular summary of dialogue between resource capitalization, natural ecology and social systems. The capacity of an urban culture in sustaining the urban system it belongs is analyzed through some specific cultural practices that have survived to date and apparently have been critical in maintaining the sustained urbanism of the town of Patan. It is concluded that past cultural practices helped in sustainability as they were able to cause appropriate individual and community behavior for economic, ecological and social balance. It also presents an analysis of current activities that make use of culture and/or capitalizes its ingredients to improve future sustainability. The paper concludes that cultural regeneration and deliberate culture transforming activities could ensure sustainability of historical cities.

Sustainability and Self Sustainability should always be seen in Limited Contexts

The best way to see the city in totality is to get out of it and to go far enough to observe it as a whole unit. For mega-cities with wide spread footprint of global extent, this may be a difficult, but for small towns, like those in Nepal, a walk of a few miles will demonstrate what is amiss within the city. About a hundred years ago, when similar situation prevailed in Britain, Ebenezer Howard may have taken a similar trip and thought of 'quarantining the ugly technology and spice the city with nature and culture of the rural

areas' into his Garden City.¹ Today, we know, Howard's human thoughts were quickly turned into wishful thinking. Despite of it, 'sustainability issues' are again making us revisit Nature with a renewed wish to improve our urban system.

But we must remind ourselves that closed and self-perpetuating sub-cycles are not usual even in natural systems making even the natural systems not 'sustainable' in absolute terms of space and time. The concept must remain comparative and relate to the time horizon of human relevance. Sustainability of an action may be thought to be there, if the associated dynamic changes are not perceived to result in harmful fall-outs or exhaustion within a conceivable time frame. When talking about urban sustainability, we should be meaning *limited sustainability* with less harmful changes only, both the time frame and nature of changes being a function of our knowledge and fore sight.

*Sustainability is relative to summary knowledge (culture) and socially limited fore sight.

Revisiting the Context of City and Sustainability

Much like the dependency of man on Mother Earth, the root economy of urban areas is dependent on the rural hinterland. Whereas in early urbanization, 'rich and opportune' hinterland caused cities to develop at the sites most vantage for economic exploitation of the hinterland near by, with the successive growth of trading, industrial, commercial, communication and information cities, this hinterland has gone through a continuous process of expansion. It is now widespread, diffuse and hazy. Yet the fact remains that cities, as economic entities, have their resource base outside of its boundaries. Without this base, there can be no city and that a city cannot sustain by itself is an axiom.²

Exploitation of particular elements of hinterland beyond the capacity of Nature itself to sustain and observed results of ecological imbalance in the natural systems are behind the contemporary man's idea and concept of sustainable development. The two basic negative concerns that the pattern of economic affairs of our age has sharply brought to

¹ Howard, Ebenezer. 1898. *Tomorrow: garden city: A Peaceful Path to Social Reform*.

² See also Kano, Katsuhiko. 2000. Observations: Proceedings of the International Conference in Sustainability of Cities, Kanazawa, Japan. p. 38-40.

focus are (1) exploitation of resources to a degree that would disable the future generation to exploit in a similar scale due to depletion and (2) difficulty in foreseeing possibility of increasing exploitation commensurate to the rate of growth of cities without causing ecological imbalance in nature. Although, all these are not happening due to city activities alone, it is certainly playing a large part. Urban sustenance issues, thus, transcend spatial boundaries of the city itself and sustainability thoughts and actions need to play in an urban-rural continuum. We need to discard the concept of bounded rural-urban divide as the first step towards urban sustainability. *One of the objectives of this study is, therefore, to explore, to what extent the traditional culture of the city of Patan responded to this rural urban continuum and to what extent current city actions or policies promote its continuation into future.*

*Urban sustainability demands direct recognition and nurturing of urban-rural continuum.

In contrast to the long age and aging of Nature and natural changes, man made urban systems are new, the built culture having been around for only ten thousand years³. For a phenomenon with such a short history, it may be unreasonable even to expect a development of balance. In addition, urban physical ecology exhibits characteristics so divorced from natural physical ecology, such as heat-generation and retention, dry sub-surface, supply and waste concentration, to name a few known ones⁴, that neither the principle of near balance nor how it is to be reached has yet been understood.

Like a living organism, urban system grows and also decays. Growing cities are managed through a development of cultural practice that brings an order to the growth and stems tendencies towards decay. Decay sets in when the carrying capacity of the system is exceeded either with depletion of resources or with the inability to dispose of waste. Thus, the carrying capacity of urban systems is a composite function of

- (a) Supporting capacity (a sum total of resources) and

³ Cities appeared in the scene about 5500 years ago. However, large-scale urbanization has a history of only about a hundred years.

⁴ Fitch, James Marston. 1992. *Historic Preservation, Curatorial Management of the Built World*. Univ. Press Virginia.

(b) Assimilative capacity (a sum total of waste disposed)⁵.

The city is a concentrative system that draws inputs from a wide hinterland, the extent of which has been a function of technology, transport and communication, and concentrates outputs within. A portion of this output is waste and creates, through its diffusion and disposal, problems in the physical environment. Thus, within a short time, in addition to the problems of resource sustainability, modern cities have also brought to the fore problems of environmental imbalances. Like the resource base, environmental fallouts, such as those related to air, water and disposal of waste, also transcend the traditional boundaries of authority and responsibility of a city⁶. *Thus, also from the perspective of city environment, sustainable management of cities demands ability to reach outside of 'official administrative and political boundaries'*. The extent of this 'outside area' varies between cities. But for each city, the extent appears uniquely related to its cultural state.

<p>*As much as urban sustainability is dependant on supportive capacity of resources, if not more, it is dependant on the ability of the urban system to absorb waste.</p>
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One cannot but agree that a sustainable city has to move towards “a lasting supply of the natural resources on which its development depends and a lasting security from environmental hazards which may threaten development achievements”. Here, the word ‘lasting’ should simply echo that it ‘meets the needs of the present without compromising the ability of future generations to meet their own needs’, assured within the ambit of the knowledge of our time. It is important to note that the time frame brought into focus by the word ‘lasting’ transcends the present time and asks us to deal expressly with the ‘opportunities for the future’. *We could restate this by saying that concept of sustainability in general transcends present time and solving current problems alone will be insufficient for attaining sustainability.*

⁵ Das, Prasad R. 1997. “The Theory of Urban Decay”. Seminar paper, SPA, New Delhi. Unpublished.

⁶ For such reasons, cities systems must either incorporate exclusion of waste or invent a sub-system of its conversion into a resource. Although both the approaches were in use in ancient cultures (such as that of Patan, we will shortly discuss), they are in infancy or experimental stage in the modern society.

The usual time frame of urban planning thoughts has only recently been extended from five years or so to perspective or vision plans with time frame of twenty years or so (i.e. one generation). Sustainability considerations would require it to be extended to span several generations. Empirical review will also indicate that objective period for sustainability has been extended when economic progress objectives are coupled with social progress objectives. Ecological progress objectives will potentially extend it to much longer time frames.

We must also add that social sustainability and social balance should also be addressed as expressly as resource and environmental issues. As a matter of fact, in cities of heritage importance, and certainly in the case of Patan, it has been observed that level of survival of traditional cultural practices in a section of the society is inversely proportional to the modern economic advantage that section has over another. It is also equally true that the environmental imbalance in a city hits worst to the poor, the group where traditional culture survives to the highest order.

In addition to addressing the imbalances in the 'global' ecology, the quests of sustainable development of cities has to address the social and environmental imbalances within the urban system and across it in terms of both time and space.

Over-exploitation of resources or under-response to waste assimilation at any time by any particular generation, any place or location and by any particular social group and in any one or more of these will lead to unsustainable development or decline. To arrest such a decline, urban activities need to be balanced through time, space and social groups.

* Sustainable development for cities has to aim for three levels of safety and equity such as across time (or present and future generations), across space (or city, hinterland and globe) and across citizen groups (or social strata).

Sustainability and urban culture:

Urban Culture: Sustaining Nature, Economic Pursuits and Social Relationships Together

Culture has been aptly described as ‘a way of life and of living together in dialogical coexistence’⁷. We should clarify what are the principles of this dialogue and what are the parties making the dialogue. Compared to the urban system, we find rural societies have been more sustainable than the urban societies. Rural way of life binds together a more or less homogeneous social group in a more or less ‘classless’ society that uses indigenous technology just capable of affecting economic self-sufficiency at subsistence level. The dialogical coexistence is sought between ‘Nature and its provisions’, ‘subsistence economy and its tool of indigenous technology’ and ‘the homogeneous society of man’. Both the subsistence economy and Nature are homogenizing agents giving all the three components similar dialogical strengths. We may, thus, rural culture as a homogenizing guiding principle. Rural culture may be likened to equilateral triangle within a larger equilateral triangle⁸, whose vertices are Nature, Society and Economy. As different from this, modern urban way of life binds together a highly heterogeneous society, divided into many classes that use select technologies to affect economic growth through maximizing surplus. The equation of dialogical strength of the three basic players, Nature, Society and Economy, is dominated by Economic actions, Nature being not only distanced physically but also psychologically as economic actions get divorced from primary activities to secondary, tertiary and higher orders of economies based on value addition and creation of surplus wealth. In addition, heterogeneity of society significantly reduces inter-personal relationships and replaces with institutional relationships. The consequence of this is general weakening of the dialogical strength of the society in total social context. If we represent this by a triangle, it would be a scalene triangle with surplus economy as the most influential vertex and the Morley’s triangle for the urban culture gets closer to the dominant vertex, greatly reducing the dialogical strength of the other components. It would seem that traditional urban societies attempted to moderate the

⁷ IICRC. 1999. “Main research Project Proposal”.

⁸ If each of the angles of the triangle are trisected, each dividing ray representing equally important stance of each vertex in relation to others, the intersections will result in an equilateral triangle in the center, which we may liken to ‘culture’. (Morley’s theorem states that if angles of a triangle are trisected, the intersection of trisection lines form a equilateral triangle.)

dominant status of economic pursuits and increase the social ties between the many specialized social groups through conscious buildup of cultural practices. Culture of the traditional urban societies is, therefore, a summary applied knowledge that reflects its composite response to nature, economy and social relationships. Recent urban societies with over concentration on economic pursuits, have reduced positive nurturing of nature and social relationships bringing about sustainability issues in focus. Traditional urban societies show that culture reforming activities were deliberate and directed to reverse negative results of reduced care for nature and social relationships. [*Illustration 1: Morley's Triangles and Culture of Rural and Urban Societies*]

The way cultural processes achieve sustainability, thus, is through striking a balanced dialogical existence between nature (resources and waste assimilation), economic pursuits (resource capitalization and waste generation) and social relationships (essential ordering of competition for resources and waste dissociation). While we can also see that balanced cultural processes were designed, developed and practiced in the past to support sustainability, a culture able to put the three together in present day context is only just being sought through international ethical norms and standards. City managers aim to provide for 'human needs' of the city dwellers, generally defined through social, economic and environmental objectives. Of these, environmental objective is usually limited to quality of physical elements such as air, water, land and sound. While providing for a good physical environment is important, it should be equally, if not more, meaningful to provide for a good emotional environment to live in a city. Likewise, while issues of social neighborhood and social peace are found addressed in literature pertaining to sustainable cities, these have not been able to sufficiently incorporate issues relating to culture of people. Culture forms an important constituent of the emotional environment of a city and demands activities that go beyond the concepts of social neighborhoods. This is particularly important in the case of cities of long urban standing and strong urban culture. Such a case prevails in Kathmandu valley towns and working ways of properly managing to sustain cultural environment assumes a two-fold significance: it can be a tool towards sustainable development and also provide an emotionally satisfactory environment.

In recent years, with the growth of tourism as the single largest global industry and growing sub-sector of cultural tourism, the potential of culture in providing economic sustenance to cities with unique cultural heritage has significantly increased. With the promotion of 'cultural industries', diverse means of economically exploiting cultural heritage have been proposed, tried and developed. Yet one cannot but underscore the caution that the business of cultural tourism needs to be approached with caution, as it is a two-edged sword that can hurt the culture itself. It has been severally observed that insensitive commodification⁹ of culture can be a disaster to the recipient society, particularly if it is a living culture. As a theoretical issue, one needs to see culture as a continuum from the past to the present and its transformation into some new form in future is to be taken as a natural process. In that sense, all cultures may be said to be living cultures. The difference between traditional knowledge and traditional culture is made here in that whereas one is knowledge per say, the other includes only those of the past knowledge that are in present use. The larger objective of this research is to find ways of cultural transformation that would purposefully aim at urban sustainability.

Why Patan¹⁰?

Exploitation to the limits of technology and culture of the times, depletion of natural resources, erasure of the economic base of urban settlements as well as precipitation of environmental problems and squalor within cities are not issues specific to our generation. Historical urbanization will show that such imbalances showed even in ancient times and societies tried to evolve ways of dealing with it. Preliminary research has shown that the Newar society, which led to the urban development in Kathmandu valley that was able to sustain itself over a period lasting for more than a millennium, did face 'small scale' problems of these types and also developed successful approaches to

⁹ Commodification of culture is not possible within the culture itself as it is not internally consumable and only assists in consumption of other commodities. However, particular cultures may be commodified for people belonging to a different culture (tourists) from outside it.

¹⁰ The city of Patan also goes by the name Lalitpur. The indigenous people of the valley, the Newars, call it Yala.

deal with them¹¹. It would seem that the major reason of its sustained urbanism was development and application of socio-cultural practices that were based on a perception that a delicate continuum existed between nature and town and both the internal and external environment needed to be continuously nurtured across time for the common good through the medium of cultural practices. [*Illustration 2 & 3: Map of Nepal, Map of Valley and Map of Patan for Tourists*]

With a history as old as that of the history of settlement in the Kathmandu valley itself, Patan has been and continues to be, to this day, an important and vibrant part of Nepal's capital region. Throughout its long period of existence, the city of Patan has played a paramount role in the political, cultural and economic affairs of the valley and the country. Today, as the second largest of the five municipal cities in Kathmandu Valley¹² and located besides its larger neighbor, Kathmandu Metropolis, Patan physically and spatially forms a part of the larger Kathmandu-Patan mega-polis. The banks and farmlands of river Bagmati, which in earlier days divided them and formed a fringe to both Kathmandu and Patan, is today more or less built up. Therefore, even as we look at Patan as a separate administrative entity today, it faces a very fast developmental fury that will, at least in the spatial sense, make it into a part and parcel of the capital of Nepal. The city managers at Patan too have seen this coming for some time and they have been seriously considering policy options available to them, to ensure retention of individual city identity at the face of the inevitable physical homogenization. The prospect of "lasting and indelible identity" is offered by its cultural and historical background and the Mayor and his team are rallying around the slogan "Patan – the city of Fine Arts"¹³. For, this study, with its central objective of investigating options to create possibilities of cultures for sustainability, these slogans are of immediate significance. The study,

¹¹ Tiwari, S. R. 1999. "Kathmandu Valley Urban Capital Region and Historical Urbanism- Historical Environment Management: Lessons from History". Paper Presented to 13th Biennial Conference of Association of Development Research and Training Institutes of Asia and the Pacific (ADIPA), on "Managing Asia-Pacific Mega Cities: Policies to Promote Sustainable Urban Development in the 21st Century", 1999, Bangkok.

¹² The national urban classification system makes Patan a Sub-metropolis. Kathmandu, which is much larger in both income and population, is a Metropolis. The other three, Bhadgaon, Madhyapur and Kirtipur are Municipalities.

¹³ Conversations with the Mayor and his team, and also, official Brochures and Profiles on Patan.

therefore, although basically following the general guidelines to arrive at data and options in a comparable framework, would also make some diversions to make the analysis as well as recommendations to be of direct use to Patan city managers as they about devising actions that would translate their slogan into reality and make Patan a culturally identified and sustained city in course of time.

Kathmandu Urban Culture – Lessons in Ecology and Social Agreements:

The Urbanization of Kathmandu Valley and Nature of the Urban Culture:

Written evidence of urban settlements in the valley are found in inscriptions that start appearing in abundance from the middle of fifth century AD, about four hundred years after the institution of the Lichchhavi ruling house. These inscriptions refer to several settlements of long standing supported by many secondary and tertiary activities such as trading, mining and manufacturing. And their well developed urban services (water supply, street lighting, entertainment, hospital services, etc.) and supporting taxation leave little doubt that fair sized dispersed urban centers existed from several centuries before. Records of Chinese visitors to Nepal in the seventh century, preserved in the Tang Annals, testify the urban nature of settlements:

“...Merchants, both traveling and stationary, are numerous; farmers are rare.”¹⁴

The Kirata Towns:

Permanent constructions, necessary prerequisites to sustained settlement conglomerations, from as early as 2nd century BC, belonging to what is popularly referred as Kirata period, have been observed in archeological digs. The Kirata settlements, called *Pringga*¹⁵, were located on fallow high ground or hillock. Many of such settlements have formed the nuclei of the present day towns of the valley. Although they have been built over through the past 1500 years and have been physically overwhelmed, their character sustains to the present times. Kirata religious faith, which included worship of the family

¹⁴ As translated by Sylvan Levi in '*le Nepal*'.

¹⁵ Slusser, Mary. 1998. *Nepal Mandala*. Reprint, Kathmandu: Mandala Book Point. According to her *Pringga* is a terminology synonymous to permanent settlement (p. 84-85).

of Siva, Yaksya¹⁶, Mother Goddesses and ancestor worship, and their places of worship, show significant reflection on the nature of settlement and the valley eco-system.

It is important from the perspective of general sustainability of agro-based urban centers to note that the Kirata conceptual objective of sitting a *pringga* on fallow and less irrigated higher lands, called *tar*, was apparently to maximize land suited for agricultural purposes. This very conscious ecology sensitive tradition emphasized the preservation and use of *dole* or irrigable slopes and *tala*, the fertile plain lands along the river banks, for agricultural purposes.

Towns in Lichchhavi period:

Palaces and temples were built in towns of the Lichchhavis and Buddhist *Viharas* were generally located outside in natural settings. The Lichchhavi towns were apparently developed with either a palace or a temple as central element with strategically located tax collectorate in the immediate vicinity, about which the city conglomeration was planned. The townships of the Lichchhavis saw the development of ponds, fed by deep wells, canals brought over long distances or naturally available water veins, as reservoirs and depressed pit conduits for water supply. This major urban service element "the stone water conduit" was also built at major road crossings.

As rulers practiced Vaisnavite Hinduism to start with and as the state was run on the basis of Vedic ritual doctrine, Lichchhavi new towns were laid out on the regulatory planning principles of Vedic prescriptions. Excavated and other remains show that the Lichchhavi capital city used gridiron layouts of *Prastara* pattern as prescribed in traditional texts.¹⁷

During this period, town festivals based on Hindu/Buddhist faiths were designed and developed with primary objectives of religious merit through pre-determined mode of social and cultural behavior. These seem to have led to an expansion of the eco-concept set into motion by the Kiratas through their 'dyochhen and pith' structure and associated

¹⁶ Although only a few Yakshya images have been found, they are still significantly remembered in socio-religious practice of 'Chhwasa' worship in Newar traditions. Apparently, Yaksyas were site specific deities.

preservation through proper behavior ensconced in ritual directives. With the Lichchhavi development, settlements started growing and *pringgas* may have expanded out to the farms, a problem that had to wait for several centuries for a solution. Finally cultural means of assuring adherence to town boundaries were developed under a wider religio-cultural framework. Another problem they faced was that the simple spring sources, ponds and the likes protected as *pith* outside the settlement, were not able to meet water supply needs of expanding towns. Water was brought through canals that stretched from the foothills of the valley to towns to feed ponds, which in turn recharged supply to recessed pit conduits, a technology that is working to this day in Kathmandu. The town had entered the phase when its activities sphere extended beyond local micro-ecology to reach spots that were of macro-ecological significance to the valley and other settlements. Festivals¹⁸ and rituals were framed to guide public behavior for protection of far away sources and water sheds from as early as the written history starts showing. These were in addition to legal strictures¹⁹, a management tool we tend to rely solely on these days. To ensure ecological behavior, instead of legal mediation relying on the power of the state, managers in ancient times seem to used ritual mediation, which was framed on prevailing religious faiths rallied on ethics, individual faithfulness and emotionally guided *inner discipline*. [*Illustration 4: Lichchhavi town of Hadigaon*]

Malla Towns: Larger in size and Wider Ritual Mediation

Although the basic structure of a *pringga* and the ecological behavioral pattern it conditioned in the then and future societies encapsulated into rituals and festivals were inherited by the Mallas, the capital towns became much larger and even the dispersed out laying towns were growing also. The first Malla capital was located in a Kirata settlements domain²⁰ and it is presumed that Kirata towns suited the Malla approaches better. It may also indicate that the desirability of the Kirata town with its ecological

¹⁷ Tiwari, S. R. 2001. *The Brick and The Bull*. Kathmandu: Himal (in Press).

¹⁸ The festival of Satyanarayana of Hadigaon coming down from Lichchhavi times is one such ritual/festival that links the town to spaces in the valley important for supply of water and ensures through participatory strictures proper social behavior to protect and to keep clean the sources, reservoirs and recharging ponds.

¹⁹ Royal orders restricting felling and burning of trees, carrying charcoal as well as cutting of branches for animal fodder in watershed areas are seen in inscriptions from seventh century Kathmandu.

²⁰ The capital of Bhadgaon was formed by amalgamating three Kirata settlements. See Tiwari, S.R., "Bhadgaon – the structural changes over history". CARD newsletter no. 1, Institute of Engineering, Nepal.

sense and comparative tenacity was better than that of the Lichchhavi capital. However, with the Malla consolidation and increasing mix and complexity of religious faiths among the people, the effectiveness of a single *dyochhen* and its ritual mediation in commanding faithful behavior must have got greatly reduced. In the same way, with increasing population living in one built up area, the influence area and the agricultural hinterland expanded beyond the ability of one *pith*. Increasing densities and large conglomerate demanded fresher ways of retaining social relationships and feeling of community. Larger water supply and irrigation systems were put in place that relied on more than one source and they had to be shared with other settlements. At the same time, natural sub-surface water systems around towns got affected. Clearly, the micro-ecology based system of the Kiratas would have failed to handle the new urban complexity.

The tendency of towns to expand outward damaging immediate economic and ecological resources had to be decidedly curbed. This was tackled through use of a revised and reinforced version of the old Kirata system and town boundaries were ritually defined through the use of perimeter goddesses - a kind of a creative use of culture to fulfill 'town planning' objectives. From the days, denser settlements developed in the valley, the formation of 'micro-heat & waste sub-structure' natural to the process of dense urban areas seems to have been apparent to Kathmandu valley planners and dwellers. More mundane systems to collect and age night soil from the city and dispose to surrounding farms as manure were developed²¹. Interior courtyards formed by groups of houses were used as *Sagah* or a composting place for vegetable waste matter. Periodic cleaning of *Sagahs* and other city areas that tended to become polluted were given religious imagery²² that demanded unflinching cleaning cycles. By locating festivities in agriculturally lean seasons, the society mobilized and capitalized voluntary labor in the guise of performing rituals for better life in next birth, *probably an allusion to future generations*. Sensible design and local material usage, ensured through infusion of 'religious and physical threats' incorporated in the working documents of the design and

²¹ Some such practice is still successfully followed in Milwaukee. In 1991 Shanghai's Bureau of Environmental Sanitation collected as much as ninety percent of human waste and converted to manure. For further current relevance see: Smit, J. *Urban Agriculture: Food, Jobs and Sustainable Cities*. UNDP.

²² The religio-cultural imagery of *lukumahadyo* can be taken as a neat example as this form of Siva was comfortable under garbage but required light air and sun on ritual occasions.

construction professionals, tried to take advantage of the warmer micro-climate. The location of dense town on fallow ridges reduced the town to a no-greenery-inside situation. Apparently this was not acceptable once the town grew in size and later towns consciously provided for lung space through several *khyo*, large chunks of open green space in the perimeter of the town. Town level festivities were designed to congregate in such spaces in annual cycles, which helped ensure that town expansion in future did not wipe these out. [*Illustration 5: Conceptual Malla Town: Bhadgaon*][*Illustration 6: Mediation across Time and Space: The Implementation Mechanism*]

All these go to show that socio-cultural codes and ethics of behavior favorable to the health of the urban community and the ecological character of its supporting hinterland, were *consciously charted and scrupulously followed*. The medium of implementation was through socio-cultural practices able to bring the town or its sectors to act together ethically. Often one wrongly believes that traditional societies were guided by universally agreed and unwritten moral codes – these cases certainly do not suggest so. The knowledge and codes were quite consciously built in cultural practices, which did not develop naturally over long period of experimental phase but were developed, timed and implemented by those who were responsible for properly directing development. Such cultural practices, ensconced in indigenous knowledge transmission mode, were able to forestall negative individual action likely to damage the community life, the city or its ecological dependencies. In large part it is these practices that led to sustainable cities in the micro-ecological setting of Kathmandu valley.

The Kirata and Lichchhavi concepts, rituals and strictures were elaborated and extended by the Malla society leading to the medieval town core structure that survives to this day in Kathmandu valley, of which Patan is an excellent example. What we see in Kathmandu today, the marvelous temples, chaityas, palace squares, monasteries and the towns they perfected into art forms for living, are mostly handed down from the Malla period, which came to an end by middle of the eighteenth century. The cultural degeneration process, which started rolling about a century later, sadly, gained such speed in the last fifty years that these traditions have earned the dubious distinction of

being called cultural heritage as different from a living culture. Although some aspects of the tradition survive as a living culture, most of the eco-sensitive and nature-urban interface aspects have fossilized. For example, today, festivals and rituals are seen as some archaic socio-religious drama of feasting and entertainment and neither the professionals nor the managers have given thought to their larger ecological objectives and strength in conditioning appropriate social behavior across time and space.

Patan Town and its growth over history

The Various Names of Patan:

Underscoring the ancientness of Patan are the many names used for Patan in the past. It is first referred as 'Yupagrama' in an inscription dated 477 AD, which refers to Patan area as *Yupagrama-kshetra-pradesa*. In the Early Medieval period, it was called Lalitapur. This is inferred from a colophon reference to Su-bahal/Guita area of north-east Patan as *Lalita-bruma* in a manuscript dated 920 AD²³. Heightened commercial activity in Lalitapur led to its renaming as Lalitapattana²⁴ in later Malla period.

The other popular name of Patan, *Yala*, occurs still later. Some late chronicles, contrary to inscriptional evidence, however, associate this name of Patan as deriving out of the first Kirata king Yalambara, suggesting its ancient use²⁵. The Lichchhavi name for Guita area, *Ashinko*²⁶, was apparently replaced about eighth century, when Buddhist monasteries were built here during the rule of Lichchhavi King Narendradeva. Given the Tibetan connection of Narendradeva, the Tibetan records possibly refer to Guita area of Patan as Ye-rang. This seems to have reinforced the use of the term *Yala* for Patan further in the medieval period.

²³ Regmi, Dilli R. 1965. *Medieval Nepal*, Part I. Calcutta: Firma K. L. Mukhopadhyay. He refers to the Manuscript "Astasahasrika praganparamita" with word '...Lalitabrumah...' as a place name. (p. 109-110)

²⁴ Towns largely inhabited by traders are called Pattana.

²⁵ The Sanskrit term 'Yupa' translates as 'Yala-sin' in Newari and mean the ceremonial totem pole. The same word is also applied to the 'earth tree' symbolically rising from the center of the stupa to the zenith. Slusser (*Nepal Mandala*) speculates that 'Yupagrama' might be a Sanskrit transliteration of 'Yala'.

²⁶ Ashinko as a place name is possibly related to areas down to the river. The confluence that is today called Sankhamula is called so because the ancient name for Hanumante river was Sanko.

Patan is the latest of the names applied to our city of research and this has been in use only from around seventeenth century since late Malla period. It was apparently a Nepali simplification of Lalitapattana²⁷. [*Illustration 7: Patan town area in Lichchhavi period.*]

The Legendary Founding of Patan:

Like the other towns and villages of Kathmandu valley, the origin of the town of Patan is shrouded in legends and tales. Buddhist legends relate that the town was initially given a formal plan based on 'Dharma-Chakra', the Buddhist 'Wheel of Righteousness' by Mauryan Emperor Ashoka²⁸. The four 'thurs' or mounds located on the perimeter of Patan are ascribed to him through their popular name of Ashoka Stupas and are venerated by the Buddhists to this day. The stupas do seem to define the traditional sector of the town and their general shape is also very close to the architectural typology of Ashokan stupas. The main arterial street of Patan link the two pairs of Stupas (East-West and North-South) and intersect at the Durbar square, the city core of Patan, echoing the Dharma-chakra layout. Despite these physical indicators, neither the visit of Emperor Ashoka to Kathmandu Valley nor the presence of Buddhist Monasteries²⁹ in Patan in Lichchhavi period is historically substantiated. It is also notable that the main Lichchhavi period high-path passed by the East Stupa and followed a north-west direction to cross Patan through Su-bahal and extended towards Kathmandu³⁰. With Buddhist population congregation starting around ninth century, Patan become a predominantly Buddhist settlement by mid-Malla period³¹ only.

The antiquity of the *thurs* is, however, not doubtful. Their role as Kirata funerary mounds have been suggested³² and the presence of many numinous stone shrines³³ there about

²⁷ Regmi, Rishikeshab R. 1993. *Kathmandu Patan & Bhadgaon*. New Delhi: Nirala.

²⁸ Wright, Daniel, 1966. *History of Nepal*, Reprint, Calcutta.

²⁹ An undated inscription in Lichchhavi script located at Chapat area of eastern Patan suggests that a Mahayana Buddhist nunnery existed there about. This appears as an exception and could be reflecting a relocation act of the transitional period or later. A minor monastery was located about current Yampibahi about the northern Stupa of Patan.

³⁰ Gutschow, Neils. 1982. *Stadtraum und Ritual der newarischen Stadte im Kathmandu-Tal*. Verlag W. Kohlhammer. It may also be noted that the east stupa, located across the river Lunkhusi or Karmanasa, could not form a planning set with the other three.

³¹ Tiwari, S. R. 2001. *The Ancient Settlements of the Kathmandu Valley*. Kathmandu: CNAS.

³² Mary Slusser, *Nepal Mandala*, p. 96.

³³ These are popularly referred as Digu-dyos and are associated with ancestor worship ritual of the Newars.

corroborates that the sites were peripheral funeral space of Kirata settlements. A further affirmation is obtained from the Gaijatra festival of Patan, when the local Jyapus visit the four Stupas in memory of their dead in the early morning darkness.

Still other chronicle reports that Patan was founded by a certain King Veer Deva in 299 AD³⁴. As the date corresponds to early Lichchhavi period and no Lichchhavi king with such a name is known, this too appears as a misreporting.

The Kirata Patan:

However, Patan area almost certainly was settled in the Kirata period and several imprints, such as Kirata places of worship³⁵, the mound popularly called after a Kirata king³⁶, several numinous shrines used by Newars for their ancestor worship rituals and the *thurs* themselves, are still extant to prove the point. On the basis of Lichchhavi inscriptions and settlements named there in, it can be established that Kirata settlements, namely Kada-pringga about Pulchowk mound³⁷, Gangula about north stupa, Thambu about the Patuko-mound and Tegvala about Tyagal were extant in Patan prior to Lichchhavi period³⁸. Popular folk memory in Patan is that the Kiratas and the Lichchhavis had their final war at Chyasal. The *Jaat* groups inhabiting the area and some of their cultural practices do indicate Kirata precedence.

³⁴ Patan, Official Tourist brochure of Patan municipality.

³⁵ Mahalaxmi of Tyagal, Uma-Maheswora of Tikhel, etc.

³⁶ *Bhasavamsabali* chronicles state that the last of the Kirata palaces was located in Patan and the ruins at Patuko-don have been suggested to be the palace. Patuko-don is located in the center of present Patan. Archeological studies have not been made here so far.

³⁷ Current memory may be seen in the name Ku-pon-dole (Kada-pringga-dula)

³⁸ Mary Slusser, *ibid.*, pp. 97, wrongly places Gullatangrama also in north eastern Patan quoting Dhanabajra Bajracharya's *Lichchhavikalka Avilekh*. Careful analysis of the inscriptions will show that Gullatangrama was located in Deupatan area.

Patan in Lichchhavi period:

The Lichchhavi development around Patan was mediated by two main highways, one linking Lubhu in the south east of the valley with the north-west (*Konko-Vilva* Marga) and the other linking Lele in the south to Deupatan in the north. The roads intersected about Swotha defined by Swotha-Narayana temple. Whereas *Asinko* (current Khapinche and Guita) and *Mulbatika* (current Su-bahal and Mangalbazar) settlements occupied the north-east quadrant, the south west quadrant was occupied by *Yupagrama* (areas south-west of Mangalbazar and Taha-bahal). Patan's location at the crossroads emphasizes its trading role, that grew steadily over history.

With the introduction of urban water supply in the form of depressed pit conduits³⁹ and irrigation canal systems⁴⁰ for intensive agriculture of the immediate hinterland of Patan, the resource linkage of Patan got extended to reach further out to the foothills on the south. During the rule of Amshuverma (592-616 AD), a grand irrigation cum water supply canal was made to supply to the settlements of Thambu, Gangula and Mulabatika⁴¹. Later in 724 AD, the Mulabatika canal water were further distributed among several villages to the east and south of these areas, reaching as far as Tyagal. The intake was apparently from a spring source⁴² in Bungamati area. The earliest known water conduit in Patan was constructed in the year 571 AD at the northern end of the current Palace Square, presumably following the construction of the canal⁴³. The heightened commercial activity in *Yupagrama* supported, in part, by the improved agricultural practices with the availability of extensive irrigation led to its growth in such proportions that it amalgamated the settlements around to become a semi-autonomous urban area with the status of a *drangga* by 643 AD.

³⁹ Earlier water supply system was apparently based on use of shallow wells and ponds. The two systems are still in use to date.

⁴⁰ The Lichchhavis used a non-Sanskrit terminology, *Tilamaka*, for its irrigation canals. This is apparently a Kirata terminology. Given that the Newari term for depressed water conduits is *Hi-Ti* (*Hi* standing for moving and *Ti* a degeneration of Tila or conduit), even as there are no physical evidences available to prove it, the knowledge of depressed pit conduits as well as irrigation may be said to have existed in Kirata days.

⁴¹ Inscriptional record of repairs and usage, dated 624 AD, of this canal is located on the Dabali at the end of Mamadugalli, the meeting place of the three settlements of Thambu, Gangula and Mulabatika (?).

⁴² This is inferred from recurrent reference to the place as a water hole and the nature of the site itself.

⁴³ This has been concluded as the conduit is recharged by the 'mulabatika branch' – see illustration 10. Recent studies have shown that this conduit is not supported by any local aquifer.

The Lichchhavi period saw a slow entry of both Vaisnavite Hinduism and Buddhism into Patan area but no major Hindu temple was built in early period. The annexation of Kirata sites around north and south of Yupagrama seems to have begun with Buddhist settlements around Yampi-bahal and Batuka-Bhairab areas, particularly during and after the rule of King Narendradeva (643-679 AD). A part of the Kirata population seems to have continued to stay with their tradition of Mother Goddesses and proto-Saivism, whereas others changed over to Buddhism or Hinduism.

Narendradeva further expanded the water system of Patan also and newer intakes were developed. Recent studies⁴⁴ have shown that the intake of this canal went past Tika Vairab into the Lele valley (Lele Khola and Naldu Khola – see Illustrations). Narendradeva also started a large festival of Rato-Matsendranath of Patan to commemorate this great water works. The route of the Rato Matsendranth festival clearly demarcates the non-Kirata domain of Patan of that time and scrupulously excludes Kadapringga, Thambu, Gangula, Tegvala and Batuka Vairaba areas. The festival was apparently designed for the benefit of Yupagrama and Mulabatika residents, both of which were settlements of the Lichchhavis, and the Buddhist population of north-eastern sector, with whom Narendradeva had his special affiliation⁴⁵.

Early Medieval Patan:

In the Early Medieval period, as the capital city of Nepal vacillated between Hadigaon and Kathmandu, Patan remained a part of the state. The development of Buddhism and monasteries was apparently picking up fast in the north-eastern and central sector of Patan and learned activities like writing religious hand-written books were undertaken in the monasteries. The development of Buddhist settlement of Patan continued to concentrate in the north eastern and eastern sectors. So much so that the currently central Palace square area was popularly referred as ‘*Yankuli*’⁴⁶ sector or north-west corner, even

⁴⁴ UDLE, Patan Conservation and Development Programme. Study Report: Water Systems.

⁴⁵ Their importance is still enacted in the festivities at “*Degu Jatra*” at Sundhara as part of the Matsendranath Festival.

⁴⁶ The word is also used to indicate ‘headman’ in historical documents. This usage is possibly related to ‘*si-kayegu*’ festival.

as late as sixteenth century. Similarly, the current Mahabaudda area was 'Wonkuli' sector or south-east corner. Seven major Monasteries and their associated *sanghas*, with the central one called 'Saptapura' monastery⁴⁷, developed in the Yupagrama and Mulabatika sector of Lichchhavi creation. With only two of the seven monasteries, the development of Yupagrama was slow and it seems to have stagnated into *Yupatole*⁴⁸. The power and importance of the seven monasteries led to the setting up of a semi-autonomous federal rule of the seven *sanghas*, or *Sapta-kutumbajas* in Patan, which often defied the Malla power. During this period, within Buddhism itself, two kinds of changes seem to have started. Unlike the Lichchhavi period when Buddhist Monasteries were apparently located outside the cities, the Transitional period saw the monasteries moving into cities. At the same time celibate monks and nuns (*bhiksu* and *bhiksuni*) were converting to married monk hood. In addition to *Sakyabhikus*, we find *Bajracharyas*. It was these new developments that ultimately made Patan the most Buddhist of the three cities of the valley during the Malla period, even though the Malla rulers and also some of the *Sapta-kutumbajas* later took to Hinduism. The Tyagal area (Ganchanani), the eastern Kirata funerary site of Patan, apparently continued to be used as site for setting up funerary memorials.⁴⁹ Tegvala and Kadapringga retained their Kirata population with minimum religious conversion.

The Malla Patan:

The assertion of independence by Patan seems to have been frequent following the breakdown of the Lichchhavi ruling house. Even after the disturbed political state of the valley was settled by Anandadeva⁵⁰ when he set up his palace and capital at Bhadgaon

⁴⁷ The seven monasteries were Tangala vihara in Tangal, Tava vihara in Tabaha, the group of monasteries in the south east (Vishnuksa vihara, Onkuli vihara or Uku baha, Gvakse vihara or Guji baha, Sako vihara or Saga baha, Yanchu vihara of Yachu tole), Hakva vihara of Ha baha tole, Hiranyaverna vihara of Kwalakhu, Jasodhara vihara and Datta vihara of Guita area (?).

⁴⁸ This reference occurs in a manuscript dated 1150 AD. Regmi (Medieval Nepal, Part I, pp. 178) wrongly places Sri Pannaga district as Nagadesa. It should be read as 'Sriman Naga Visaye', which was applied to Patan. Cf. Ins. XXXV, Part II, pp. 33. Also Bhotojatra folk-lore.

⁴⁹ A memorial image of Uma-maheswora was set up here in 1012 AD. See Ins. IV, Regmi, Medieval Nepal Part III, pp. 3.

⁵⁰ Some authors (e.g. Korn, Wolfgang. 1976. *Traditional Architecture of Kathmandu Valley*. Kathmandu: Ratna Pustak Bhandar) have misplaced Anandadeva's Tripura palace at Mangalbazar.

around 1137, Patan continued to occasionally assert independence. This was to be so over the next two centuries, until Jayasthiti Malla came to power.

The rule of local governor, *Mahapatra*, provided the setting for a sustaining development in Patan. It would appear that the direct Tibetan trade and control of the stone quarries of Kotkhu, led a crafts specialization of Patan centered around bronze and brass works, stone carving and, to a lesser extent, gold and silver crafts. Due to the concentration of early population in the north-eastern sector of Patan, these specializations are also located in the same areas to this day. With direct Tibet trade and control of most of the areas south of Hanumante, Bagmati and Balkhu rivers, Patan's economic strength had grown remarkably compared to Kathmandu or Bhadgaon.

In 1349 AD, along with other towns of Kathmandu, Patan faced a wave of destruction at the hands of the Muslim ruler from Bengal. He destroyed the Siva temple of Kumveswora and the Buddhist Stupa of Pimbahal. Patan seems to have made a defense wall around it immediately following this. This defense set up also seems to led to the diversion of the small drain/rivulet, that earlier flowed northwards through Mangalbazar taking care of overflows from the Lagankhel pond, eastwards skirting the SE section of the wall into the rivulet now called *Lunkhusi*. For such reasons, when some festivals⁵¹ take place, a crossing of *Lunkhusi* a little to the east of Mangalbazar is enacted as a ritual. The extent of the town wall shows that all the settlements were now united as one town. The marriage of a visiting Prince Sthiti to the eight-year-old Rajjalladevi, the lone heir to the throne, and the strong rule that followed, took Patan firmly under the Malla rule by 1370 AD. The mark of this submission to Bhadgaon was the attendance of Jayasthiti Malla in the festival of Rato Matsendranath of that year. Later again the power of Saptakutumbaja Mahapatras increased and they virtually ruled Patan independently – Purander Singh being the last of the powerful Mahapatras. [*Illustration 8: The walled city of Patan ca. 1350 AD.*]

⁵¹ During Rato Matsendra Chariot festival, the revelers raise their clothes to avoid water at this place and the gods clothes have to be changed also.

Major restructuring of Patan town seems to have happened as the Mallas re-exerted their power, when Siddhinarasimha Malla became king of Patan. This restructuring shifted the focus of the town from the north cross roads about Manihiti to the south. The monastery, “Haka Bahal”,⁵² existing on the north end was removed and the now famous palace court, Sundari-Chowk was built on the southern end. Within a century, the development of the Durbar square was completed. Patan had also very swiftly changed from a predominantly Buddhist town to show a marked Hindu character. The Mangal bazaar-Pulchowk section of street was made significant and its commercial function expanded greatly. Patan expanded to the north-west and west of Mangal bazaar. As the Hindu *Gai Jatra* was reorganized, so was the Mataya Baha Jatra, both of which tried to bring unity among the respective followings. The main streets of Patan were redefined and a common route for all city level festivals affected integration of the new and the old sections of Patan.

With the increasing popularity of the Shakti-cult, the *piths* of the earlier period became more important and some more were added to create the boundary set of the *Astamatrikas*, the eight Mother Goddesses. At this time even the town seems to have been re-sectored to correspond with the nine-square potent diagram (*mandala*), the central square being occupied by the Palace. Accordingly, Chysal was named so after its location in the eighth square and Gustala became Guita to closely express its location in the ninth square. In a sense, a superimposition of a ritual cosmic pattern over the more than five small individual settlements, was made to make it into a ‘complete’ large town. However, in the areas with concentration of Buddhist population, some of the *dyochhen* corresponding to the outer *piths*, got amalgamated into the monastic institutions. One of the best examples of such an integration can be seen at Su-bahal, where the mother Goddess is now venerated as Basundhara, the Bajrayana Goddess of earth and wealth and has a shrine on the side wing of the monastery. The earlier *dyochhen* of Purna-Chandi, similarly, got absorbed into the new ritual image of Patan with the Malla expansion.

⁵² Currently the spot is occupied by Keshav Narayan Chowk. A palace with four corner pavilions, called Chowkot palace (Chau-*Kuta*) was first built as a replacement of the monastery. The “Chowkot” palace was still later replaced by Keshav Narayan Chowk, which still shows two of the *Kutas* on top.

The 'jaat' sectorization of town, the spatial arrangement of 'city professions' or social zoning, got crystallized to bring about a finality to the town form. The professions more important to the palace were located to the west of the palace at Mangal bazaar.

Late Malla period also saw heightened cultural activity and along with expansion and resurgence of older festivities, many new festivities were designed and popularized giving the city a varied religio-cultural entertainment. Apparently, many of these festivities incorporated good city concepts also such as public cleanliness, protection of water supply sources and distribution systems, upkeep of wells and water conduits, protection of trees and clump of trees, etc. The earlier traditions were evidently revised to take care of the growing town and its changing environmental demands.

Transformation of Cultural Accretions in the Past:

Various precepts and principles of urban living were applied and developed in Patan over the long period of history and many of these might have been lost over history as the precept and the associated cultural actions themselves lost relevance to its practitioners. It is particularly of interest to note that despite the changing religious faiths of the people over history was characterized by continuous assimilation and adaptation of earlier practices. Even the two great religions, Hinduism and Buddhism, the latter being of more importance to the people of Patan, did not totally reject the faiths of the aboriginal Jyapu community. Their harmonious adaptation with each other can be seen most vividly still today in the Su-bahal area of Patan. Current cultural practices in Patan, like in other historic towns of Kathmandu, still carry quite a few traditions from different periods of its development. Although there is no doubt that the practices have been subjected to adaptation over time, their existence well upto today point to their continued relevance to living. Their long sustenance itself may be the reason behind the long sustaining urban culture of Patan. We shall analyze some of these cultural traditions so as to identify elements that have helped assure sustainability to the town of Patan over its long history.

First Cultural Period:

(i) ***Dyochhen* and *Pith***: Recognizing urban-rural continuum and ecology

The Kirata settlement, *pringga*, was built around a built-space-protector god, a temple or a religious building, which came to be known as *Dyochhen* later. The *Dyochhen*, literally the house of god, had a counterpart natural spot outside the town called *Pith*, the natural abode of the godly spirit. The out of town symbol was of a nature-protector. The *pith* was always located in an ecologically important site, such as, clump of trees, spring source of water, hillock and the like located in the agricultural hinterland of individual settlements. The in-town deity usually occupied the vantage central space of the settlement and the *pith*, a ecologically sensitive spot in the farms, the mainstay of their economy. The governing principle of sustenance and survival of the town was expressed tacitly in the requirement that every settlement must have a set of *Dyochhen* and *Pith*. A closer examination of the rituals and imagery shows that both the spots are occupied by two aspects of the same tutelary and the continuance of either of them depended on the well being of the other. The linkage of the resource base, the surrounding agricultural land⁵³, to the settlement was thus stated explicitly in the design of the settlement and the siting of twin faceted deity in the town and in the farms at a spot of sensitive ecological significance. Indeed, the Kirata town makes it clear that without the ecology of the *pith*, the farmland will not yield sufficient produce for the residents of the town and the town itself will ultimately not be sustainable. Conceptually, therefore, the Kirata town clearly recognizes its dependency on resources outside the boundary of the settlement. The importance of the *pith* to the survival of town led it to be ensconced in the faith.

Through the religious faith, it sought to constantly and continuously remind the city dwellers that the sustainability and prosperity of the town was dependant on the protection of Nature and its place specific micro-ecology. A dispersal of such a group of similarly conceived settlements, each aimed at sustaining local micro-ecology, ensured that urban expansion did not tamper with nature.

⁵³ This is the case of use of 'mediators through space'. Since the resource base of urban centers have always been, and remain so to this date, outside of the urban area or in the rural hinterland, for any sustainability to be achieved in a real sense, the rules of survival need to applied outside its boundaries. The Kirata town recognized this resource linkage with its economic base, the agricultural fields, and thus some

It has already been pointed out that at least four Kirata pringgas were located in Patan area, namely, Kadapringga, Thambu, Gangula (Gigvala?) and Tegvala. Two more, which may have gone by the names, Yugvala (?) and Jajje (?), were also around. The long intervening time has obliterated some of the elements forming the dyochhen and pith set for these settlements and their association to particular settlements is difficult to be firmly established now. However, based on the location and religious ritual affinity traces of the farming community of Jyapus, such as Maharjan, Prajapati/Awa and Dongol, and the Nau, all thought to be descendents of the Kiratas, the following dyochhen and pith sets seem to have belonged to the following settlements:

- (a.) Kadapringga: Pulchowk Stupa- Racheswari (?) and Vaisnavi of Yappa.
- (b.) Thambu: Mahalaxmi of Nakabahi and Dhantila Varahi pith on the bank of Bagmati⁵⁴
- (c.) Gangula(Gigvala?):Chinnamasta of Mamadugalli (?) and Sikubahi⁵⁵ pith near north stupa
- (d.) Tegvala: Mahalaxmi of Tyagal⁵⁶ and Balkumari of Sasukhel⁵⁷
- (e.) Yugvala (?): Naudon⁵⁸ and Mahalaxmi of Thasikhel
- (f.) Jajje (?): Purnachandi and Vairabi (?)

Even today, the ecological significance of most of the piths for the continued health of agricultural economy is evident. The importance of these places to the farming community of the Jyapus is recognized to this day by festivities popular with them. It may be shown that later water works linked these very places and further augmented the irrigation provision of the farmlands specific to various settlements. [**Illustration 9: Kirata towns of Patan and their tutelary sets**]

recognized this resource linkage with its economic base, the agricultural fields, and thus some of their cultural practices that mediated across the boundaries, led to ecological sustenance of the urban area.

⁵⁴ Remembered in Pigan Puja festivals on Chaitra Sukla Astami.

⁵⁵ The pith was refurbished with new images of Mother Goddesses in Lichchhavi period (574 AD).

⁵⁶ The temple was called Matin-devakula in Lichchhavi days and underwent a reconstruction in 622 AD.

⁵⁷ Settlement (c.) and (d.) appear mixed up in the festival of Mahalaxmi and Balkumari held on Ghode Jatra or Chaitra Chaturdasi. Purnachandi is, somehow, not linked in this festival.

⁵⁸ This place close to Chakra Bahil is remembered as a funerary site.

(ii) **The festivals:** Ensuring follow-up across generations

One of the most ancient group of festivities, in Patan, relate to the worship at *Pigan* sites. Literally, *pi* means located outside the town and *gan* stands for numinous stones. The *pigan* is the *pith* of the Kirata town. These folk festivals, mostly celebrated in the *Chaitra Dasain* period (March-April) mainly by the Jyapus are location specific and must start from the spot of the in-town tutelary and a procession is made to the *pigan* or the *pith*, associated images and stones along the way getting their share of worship. It is quite obvious that through these rituals and location specific festivals, the ecological significance and the importance of keeping them up to posterity was driven home to the farmers. It was made into an annual ritual, lest it would be forgotten as a mundane matter.

Thus we see that the ecological relation of the farm with water and of the farm with the town, established in the system of twin tutelary, was constantly restated and their sustenance as the key to the continued survival of the settlement itself reiterated and perpetuated through cultural behavioral pattern in exacting rituals and festivals. The latter as a set of social agreements or rules of behavior enabled the regulatory controls to be administered through several generations in future⁵⁹.

The following three festivals, belonging to Thambu, Yugvala and Tegvala of Kirata days, have survived fairly intact in the spirit of the Kirata days and the Jyapu communities, even as the site of Balkumari shows overlap with later religious developments. The other sites and their festivities have not survived due to displacement of the Jyapus or annexation into folds of Buddhism (e.g. Pulchowk Stupa - Racheswori, North Stupa and Naudon) and Hinduism (e.g. Purnachandi, Vaisnavi, Chinnamasta and Sikubahi).

(a) The *Pigam-Puja* of *Varahi*,

⁵⁹ Here festivals and rituals appear to have been used as ‘mediators across generations’ or rules that will continue to be implemented through several generations in future, an important reason for its sustainability.

- (b) The Jatra of *Mahalaxmi*⁶⁰ and
- (c) The Jatra of *Balkumari*⁶¹.

These festivals have been able to sustain the understanding and appropriate social-cultural behavior commensurate with the concept of ecological dependence of urban areas on natural agricultural hinterland across generations, simply because these were built into religious practices, which people usually do not discard unless great external threats or economic debacles come into play. [*Illustration 10, 11 & 12: festival routes of Varahi, Mahalaxmi and Balkumari*]

Second Cultural Period:

(iii) **The Guthi:** Assuring Institutional and Financial Sustainability

The institutionalization of management, operation and maintenance of religious, social and cultural artifacts and activities in urban area appears already well developed as the Lichchhavi inscriptions appear in the scene at Patan or other places in the valley. This was done by the system of ‘Gosthi’ or ‘Gosthika’, which was a corporate body ‘financed to perpetuity’ through land grants or other ‘fixed deposits’. Such bodies were created both by the government and private citizens to see to it that the operation and maintenance of the artifacts and activities set up as a community service by them did not suffer in future either for lack of fund or after their death. The institution of the Gosthi had built financial and institutional sustainability of such surety that they have survived to this day as the *Guthi*.

It was usual for anyone setting up a temple or a religious activity to allocate a piece of agricultural land, cultivate it under tillage and require the tiller of the land to provide a fixed portion of its agricultural output, variously referred to as *ma*, *pima*, *pindaka* and *pindakama*, etc., annually, to the operators of the temple to cover costs of daily worship (*karana-puja*), maintenance (*khanda-futta-pratisamskara*) and its ritual and festive

⁶⁰ Possibly because of the near total obliteration of Naudon, the festival of Mahalaxmi starts from the pith and after going round the south-east section of town, including a worship at Naudon area, returns to the starting point of the *pith* itself.

⁶¹ The festival of Balkumari also has been extended to the palace area following the annexation of Balkumari as Saraswoti site in the Malla period.

activities (*yatra*). The right of the tiller was recognized as permanent and could only be transferred to the legal heirs and not saleable as the ownership of land was kept with the temple or its activities. This concept of institutional ownership, possibly arising out of the republican nature of the Lichchhavi rulers, although commonplace today, is remarkable for that time. Often, the management of the annual funds was assigned to a committee constituted particularly for the purpose. Such trusts were either composed of relatives (*svajana-gosthika*) of the person setting up the grant or a known private citizen and his appointees or the *sangha* in the case of Buddhist institutions. Even government funds were allocated to private trusts for similar purposes. Some of the trust funds, which were based on encashed agricultural products, also followed the recurrent deposit system (*Dhana-briddhi*), suggesting possibilities of corporate investments. This system not only assured a perpetual flow of resources (*aksyaya*)⁶² for the continuance of cultural practices and lasting institutional setup for its management, but also brought in community participation in upkeep of culture. Through the *Guthi* system, citizen participation in keeping the city clean was also developing as a cultural practice. We find a dated record of 1172 AD of a private person setting up of a land trust, *Guthi*, for street cleaning in Patan city. The *Guthi* system was further widened during the Malla period to cover city services, clan activities and social functions also. Indeed, it would appear that by the end of Malla period, the role of the state in maintaining the city, its temples and festivals, its social functions and even activities of the national scale, was reduced to a minimum and the continuity of cultural accretions was managed and adapted by the community, for whom it had come into being in the first place.

The cultural tradition of the '*Guthi*' has been crucial in developing, operating and sustaining the town's religious, social and physical infrastructure over the last fifteen hundred years. More than the religious faiths, it was the *Guthi* and its structuring that led to the overall sustenance of community services buildings, water supply, cleanliness and drainage. The *Guthi* effectively channeled 'individual wealth' into public endowments managed by committees recognized as permanent entities. It is important to note that the

⁶² This word used in the inscriptions is best translated as 'that would last for ever' and worked as an endowment.

rights of the donor ceased with the formation of the committee and it was the rights of the latter that continued to perpetuity. It is also apparent that the extended family system of social organization prevalent in the traditional society led to a continuous expansion of the *Guthi* members ultimately making it look like a wide community organization. The latter resulted in fuller clan participation in maintenance and operation of local services. Although capital investments, in principle, were not sought from the committee and it was only expected to utilize, operate and maintain the facilities created, the trust resources were also voluntarily enlarged by the community as its size increased with natural growth.

The far sightedness and tenacity of the system is more than attested by the fact such institutions had survived intact almost to this day. It is also to be noted that many of the *Guthi* associated with Buddhist institutions of Patan suffered under the political changes following 1768, when their *guthi* lands were apparently granted to others.

(iv) **The Matsyendranath Festival:** Recognizing Water as an Urban Resource

The large water-works both for irrigation and drinking water were installed at various times in the middle Lichchhavi period. This system, with the earlier intake located at Bungamati, about four kilometers from Patan, was later expanded with additional tapping of water from as far as Nala. It had survived well up till recent times and has gone into disuse and destruction only around the town of Patan today. The overflow runoff of this great water works was apparently canalled across the town⁶³ and into Bagmati river. *[Illustration 13: The Rajkulo of Patan][Illustration 14: The System of recharging the Stone Water Conduits][Illustration 15: The route of Rato Matsendranath Chariot festival.]*

According to legends, an extensive festival of Sri Bungma Lokeswora, now popular as Rato Matsendranath, was initiated and popularized in the Lichchhavi period by King Narendradeva and his priest following a failure of monsoon that had caused a long dry spell and famine then⁶⁴. The faithful were told that the reason for the dry spell was Guru

⁶³ See footnote no 51.

⁶⁴ Locke, J. 1975. *Rato Matsyendranath of Patan and Bungamati*. Kathmandu: CNAS. (p. 46, also chap. 3)

Gorakhanath, who had imprisoned the *Nagas*, the agents of rain. As a ritual solution Sri Lokeswora was to be brought to the valley. They were guided in this quest by serpent king *Karkotaka*. As Sri Lokeswora arrived at Bungamati, Guru Gorakhnath got up to pay his respect to new arrival and released the *Nagas*, who instantly made it rain and saved the valley. We can interpret that an extreme draught had adversely affected the agricultural output⁶⁵ and a state intervention was called for. The festival timing (April-June) indicates that the shortage of water was for the seeding and planting of rice and the intervention had brought water for the planting season. Although the legend is about divine intervention, in reality, it seems to have been extension and reconstruction of a large irrigation canal system for Patan. Inscriptions provide evidence that the waterworks had been extended between the rule of Jisnugupta and Jayadeva, when Narendradeva was also in power. The legend appears woven around act of expanding the water works system that brought increased supply of water for irrigation to the town of Patan and its immediate hinterland assuring well being of its agricultural economy and people.

There is little doubt that this festival is a socio-religious version of annual revisit for necessary repairs of the intake, stone aqueduct⁶⁶, canal, city reservoir pond and its distribution system. Indeed for the proper conduction of the festival, water must be available at Lagankhel and Pulchowk ponds and the stone water conduit of Sundhara running and well. Even the reservoir overflow canal had to be flowing. In other words, prior to the festival, the system must be maintained and made operational. Thus Bungamati, where, in Kirata period, the temple of Goddess Bungayumi was located, was apparently annexed⁶⁷ for the intake purpose and the festival linkage of Patan and Bungamati established for building up perpetuity.

The festival of Rato Matsendranath, a cultural activity, is, therefore, not just an archaic religious festival, but incorporates essential mundane activities required for the

⁶⁵ A side plot in the story talks about how the paddy crop had been only yielded rice husk and how with the grace of the 'god', it had been possible to grow full grained paddy subsequently.

⁶⁶ Legends refer to the stone aqueduct as *Sailanadi*, canal as *Karkotaka Naga*, etc.

⁶⁷ The name appears in a Lichchhavi inscription. Yumi is applied to Goddess in Kirata ritual usage and Bungayumi appears to have been a Goddess of natural water hole. (Inferred from Vairagi Kainla, 2052 BS. *Tangsing Takma Mundhum*. Kathamndu: Royal Nepal Academy. p. 47). The female nature of the earlier

maintenance of water works. It had been developed to serve an utilitarian function and if the water works had survived, the practical gains for the city could have been as vivid as the festival's ritual enactments. This is an example of a creative use of culture par excellence aimed at sustainability in historical times.

Third Cultural Period:

(v) **The *Asta-matrikas* and *Dasa-mahavidhyas*:** Bounding urban growth

Several simple mono-cellar Kirata towns and small Lichchhavi settlements amalgamated into the town of Patan. The combination of the individual *dyochhen* and *pith* structure was conveniently adapted into the cult of *Astamatrika*, as the latter gained in popularity. Consequently the earlier piths of the Kirata townlets were adapted into *Vaisnavi*, *Mahalaxmi*, *Balkumari* (*Saraswoti*), *Chamunda*, and *Varahi* and three new sites were added on the banks of Bagmati river for *Indrayani*, *Rudrayani* and *Brahmayani* to complete the perimeter set of eight *Astamatrikas*, the mother-goddesses. The corresponding *dyochhens* now occupied spaces in-between the town center and the boundary. The *piths* defined the outer boundary of the town itself⁶⁸. Religious rituals and festivals were charted and popularized to ensure that the town did not extend beyond the *piths*. More sites of micro-ecological importance were identified and given religious association. Festivities and annual socio-cultural events were put in the calendar to link these spatially and emotionally to the town and its specific zones.

However, Patan being predominantly Buddhist, the imposition of the perimeter did not work as well as it did in the case of Bhaktapur and only the older sites commanded active ritual stance. The concept of bounded urban growth, it seems, did not work for Patan primarily as the *piths* were located very far apart and the concept itself had no linkage with Buddhism. The *piths* remained as agriculture-nature protector sites. Additionally, an inner set of delimiting images, the *Dasa-maha-vidhyas*, were imposed as an urban boundary for the new areas to the west of palace, where the Malla period Hindu

image is remembered today through the popular folk memory that the festival is a visit of the Goddess to her *Maiti* (which means a lady's home before marriage).

⁶⁸ The first capital of the Mallas, Bhadgaon, combined three pringgas into one city and expanded its ritual structure by using the *dyochhens* and *piths* for eight mother goddesses. Here *piths* were used for perimeter

development was concentrated with Chinnamasta in Mangalbazar⁶⁹ providing the eastern limit. It is within this area bounded by the ten goddesses that saw concentrated town development in the late Malla period. [*Illustration 16: The Dasa-mahavidhyas of Patan and the earlier Buddhist sector.*]

As the town of Patan expanded and threatened to cross the limits, the town of Kirtipur was expanded and reorganized in a pattern similar to that of Patan and several families from specific *toles* were moved and resettled in Kirtipur.

Patan provides the first example in Malla history of creating a satellite town to tide over the problems of urban growth. With this move, the town effectively avoided heavy densification. To this day, the core density of the three towns of Kathmandu valley, remind one of this wise move in history:

Town	Core Density (persons per hectare)
Bhadgaon	10408
Kathmandu	8831
Patan	7673

(iv) **The Ganesh and town sectorization by Jaat:** Homogeneous neighborhoods in heterogeneous town

With the coming of the larger towns, the heterogeneity of the town increased threatening to break down social interaction and harmony. The town professions expanded greatly possibly bringing about wide economic disparity between professions and the interdependency on each other tended to be forgotten. The fast developing secondary and tertiary activities in the town tended to lessen the public perception of the importance of agriculture. The eighteen crafts of the Kirata time⁷⁰ were socially regrouped into 64 or more divisions⁷¹. This major social reclassification of population on the basis of professions, called *jaat*, and the rezoning of the city by *jaat* created pockets of harmony

definition. In the case of Patan, however, the piths are used more as nature protectors and remained out in the field.

⁶⁹ In some count, Balkumari of Tyagal is also taken as Sodasi.

⁷⁰ Cf. *Asta-dasa-prakritin* of Basantadeva's inscription at Thankot.

⁷¹ Different records give different figures. (Regmi, *Medieval Nepal*, Part I, p. 641)

linked to family-clan and profession at the same time. At the same time, location of similar trades in the same areas brought in greater efficiency.

The term 'jaat', which, even the Nepalese, often, mistakenly associate to religion and 'touchability / untouchability' or purity / impurity involved in the Hindu caste system, just means born to a hereditary trade or profession. Within the same *jaat*, religious affiliation of particular families was a matter of personal choice. Jaat division primarily created a horizontal social with little 'high and low' status significance in the beginning. It acquired vertical stratification traits only for small section of population at the top and the bottom towards the end of the Malla period only⁷². As the palace and the royal tutelary were located in central area of the town, the families subscribing to the profession of worship and rituals, administration and politics, were located around the palace. The other professions occupied separate *toles* around the core, equidistant from the center, in a way, physically translating the horizontal relation between the professions. The dispersal of 'jaats' in the town was directly based on 'proximity priority' decidedly related to frequency of consultation by the palace or the state. The resulting pockets of social neighborhoods seem to have helped retain a sense of social agreement and understanding in the urban scale.

Patan was divided into 23 *Toles* and a royal/administrative quarter, corresponding to the 24 broad trade groups. Each of the *toles* centered around a tutelary image of Ganesha, equally revered in both Hinduism and Bajrayana Buddhism, the two major religions of Patan. In the areas where the farming community was strong, such as at Su-bahal and Dupat area, their tutelary, the *Nasahdyo* also shared the same public area. Location specificity of these gods added to the strengthening of community behavior that was crucial in bringing about social sustainability of the town. At the same time, through the location of god images, the city also achieved a side benefit of conservation of open space, as no one dared to infringe upon the spaces of the gods. **[Illustration 17: The 23 Toles and Mamgah Quarter of Patan]**

⁷² For Patan, untouchability regulations' were enforced after the reign of Siddhinarasimha Malla only.

(vi) The *Sithi*: Keeping the city public facilities in good repair.

The festival of *Sithi*, celebrated on the month of May (*Jestha Sukla Sasthi*), is popular with the Newars and in particular, with the *Jyapus*, the farming community. In Patan, like elsewhere in the valley, this festival marks the end of about a month long celebration. Primarily a festival honoring the ancestors (*digu puja* or *Dewali*), *Sithi* is also the socially agreed period for construction of new buildings and public facilities or repair of deteriorated ones. Thus, along with general feasting, the festive activities include a mundane component – cleaning of wells, water holes (*kuwa*), ponds and drainage ditches.

Although the tradition of the worship of Kumar is very ancient, *Sithi* festival seems to have been celebrated from late Malla period, the earliest reference to *Sithinakhata* occurring in a *thysafu*⁷³ record of the year 1664. The ‘traditional period’ of annual repair of old buildings and cleaning of water sources and bodies extends from Baisakh Sukla Tritiya to Jestha Sukla Sasthi. We find Jayasthiti Malla undertaking largest water works repair known in Malla history on Baisakh Sukla Tritiya (*Akshya-tritiya*) of the year 1381 AD⁷⁴. Several Malla period inscriptions related to repairs and construction are issued on this date. The Matsendranath festival, also related to repairs of water works, starts a day after this date and is generally completed within the same period. The timing to the driest period of the year clearly relates to the repairs of buildings. The incorporation of the cleaning of wells, ponds and drainage ditches must also relate to the period when, along with the stone water conduits, wells had become an important part of the urban water supply system. Although wells were used in the valley since before the Malla period, it seems to have become numerous enough to demand an urban cultural practice of annual maintenance as the town size increased. Also, with the specialized trade zoning and homogeneous neighborhoods, the stagnant water of wells must have become acceptable even in the religious context of ‘purity’ usually associated with flowing water only.

⁷³ Regmi, *Medieval Nepal*, Part III, Thyasapu G, p. 120. Mary Slusser (*Nepal Mandala*, p. 121) makes a belabored case to suggest that the tradition may have been there since Lichchhavi period. But the fact remains that the inscription, which she refers to, makes no mention of any repairs at all. A little later, an edict of Srinivasa Malla of Patan located at the temple of Rato Matsendranath in Tamgah, dated 1673 mentions ‘Sithi’.

⁷⁴ *Gopala-raja-vamsavali*, folio 58.

The growing city demand for maintenance of these public water supply systems was seemingly sought to be addressed through a full public participation and coupled with repair of old buildings. The urban utility of water and its maintenance was put in the same status as repair of temples, patis and other religious-cultural edifices in the town. At the same time, it seems, the responsibility of extant *Guthis* was extended to cover those parts of the water supply system that did not have such a provision⁷⁵.

The festival of *Sithi* and the extension of its utilitarian component is thus a crafty incorporation of an urban activity into extant cultural practice and shows a management sense geared towards overall sustainability of the urban system. The importance and timing of the rituals is doubled up by linking cleaning the wells to agricultural water demand. This must have been done to assure appropriate urban behavior from a primarily agriculture based population. It must be for such reasons that the cleaning of wells is tied up with an additional belief that the act is an honor to the goddess of agriculture, *Basundhara*. The large scale cleaning of all urban water utilities must also have resulted in the irrigation of agricultural land for the immediate sowing season. It is this crafty cyclic linkage that lead to the tradition being sustained for centuries.

Although, wells no longer constitute a major source of water, ponds have dried up due to urban expansion of unprecedented scale, not many wells are cleaned these days in *Sithi* and building repairs are also common round the year, the utilitarian component of the festival of *Sithi* had sustained truly until a few decades ago. Even today, in sectors of towns with a majority of farming community, cleaning of wells is joyfully undertaken on the day of *Sithi*.

- (vii) **The tradition of *Luku-Mahadeo, Pasachahre*:** Removing garbage from the dump site of the Sagah

⁷⁵ It is more than likely that wells started as a private facility and as the city grew up the space took a public garb and wells also became public facility. This is likely scenario for not organizing *guthis* for the maintenance of the well in the first place.

*Pasachahre*⁷⁶ is also a dry season festival and is celebrated for three days from Chaitra Krishna Chaturdasi (April). This ancient festival of *Ajima*⁷⁷ seems have undergone several ritual additions over history. Our interest is on the starting rituals of the festival when a god, called *Luku-Mahadeo*, commands the first offer of worship. The *Luku-Mahadeo*, a form of Siva worshipped by both Hindu and Buddhist among Newars, concerns a *puranic* incident in which Lord Siva had to go in hiding. On this day, early in the morning, the faithful go to his hiding place, dig the garbage around to expose *Sivalinga* and offer worship to it.

It is interesting to note that this Siva is sited in courtyards and open spaces used for dumping garbage in the city and the festival serves the practical function of annual garbage removal from these pits. As the traditional garbage was mostly organic, the courtyards and dumps served as composting places and the festival also made manure available to the farms as a by product. It seems that the festival of *pasachahre* was adjusted in medieval time with the inclusion of this new ritual as the garbage problem in the town must have acquired not only a visible dimension but may have caused disastrous health problems. As agriculture based towns, many garbage dumping courtyards, called *Sagah*, had developed inside town, whose higher ambient temperature quickened the process of composting garbage for manure. Such a composting would not have been possible in the open farms in the cold winter of the valley. However, its timely removal was important to avoid health hazards and seemingly the tradition of *Luku-mahadeo* was invented and popularized as a folk festival to avert such a situation.

In recent days when the worship of this god was reduced to a per functionary ritual and agricultural base of the town was eroded, the *Sagahs* of Patan and other towns of the valley had become such a problem of city sanitation that hundreds of trips of solid waste removal trucks had to be marshaled to clean them. In not so long a past, however, such a situation, was not precipitated in Patan or other towns of the valley simply because the

⁷⁶ The first direct reference to the *pasachahre* festival is made in the royal edict of King Jitmitra Malla, who ruled Bhadgaon between 1672 and 1696. See: Maskey, Soni. 2042 BS. 'Kathmandu Upathyakaka Newar Samudayale Manaune Chadparva', *Nepali Samskriti*, year I no. 3. Kathmandu: Cultural Corporation, HMG.

festival of *pasachahre* had made regular garbage recycling a part of the community behavior, strongly enforced by the mediation of *Luku-mahadeo*, the hidden Siva.

(viii) The *Lachchhi* and the *Khyo*

Just as there are many large and small brick or stone paved courts with temples, monasteries and stone water-spouts, Patan's built culture is also amazingly devoid of public green spaces in the core.

In the Lichchhavi period, central areas of Patan, now the dense toles of Mangah, Saugah and Yacchu, had considerable amount of parks spaces in the then Mulabatika settlement. The nature of urbanization in Malla period seems to have ultimately caused a loss of it. The experience of modern Patan is no different and loss of open space in a common phenomenon. It is in such a context that the cultural practice of the Newars of leaving some space adjacent to the street for public 'sunning space' assumes importance. Referred to '*lachchhi*' in local tongue, this is piece of land on the street side donated by private home-owners to add to the street, without which the streets would have been much narrower and monotonous at the same time. For modern day Patan grappling with the difficulty of implementing set-back regulations, significance of this cultural practice need not be underscored.

As the city green vanished, another kind of green space, called *Khyo*, was provided at several places just outside of its built boundary. As the town itself was small, the *Khyo* worked well as 'lung spaces'. At least three such large spaces can be found to this day, i.e. Sasukhyo near Balkumari in the north east, Lagankhyo near Tamgah to the south and Jawalakhyo near Nautol in the west. Lest these too be lost⁷⁸, the town managers seem to again fallen back to use the extant cultural practices to protect and perpetuate these green spaces. Festivals seem to have been extended to these spaces and through these religio-cultural usage for a few days in the year, these greens became gods' space, never to be

⁷⁷ The faith of the *Ajima* belongs to the first cultural period.

⁷⁸ Srinivasa Malla prohibits construction in parks, *libi* (*lachchhi*) and *bhumatala* (farm?) in his 1763 edict.

encroached e.g. the '*bhoto-jatra*' section of the festival of Matsendranath and Jawalakhyo. [*Illustration 18: The Khyos of Patan*]

Lessons from Patan's Past in Creative use of Culture in Urban Sustenance:

We have identified above nine cultural activities that have survived on to modern times and that have been crucial in creating the sustained urbanism of Patan. These cultural practices conditioned appropriate social behavioral pattern through several generations and through changing cultural periods. In several instances the developments of later cultural periods can be seen as restatement of earlier practices to maintain a co-relation with newer economic activities, changed ecological conditions and growing urban waste and heat problems. We also observe that they also conditioned appropriate social regroupings so that individual's and the specialized group's behavior pattern suited the increasing urban population and their complexity. The practices incorporated elements that sought to mediate the practices through time and space.

From the earliest cultural period, we find the surviving landmarks of the *Dyochhen* and the *Pith* and the associated *pigan-puja* festival. As the resource base expanded in the following Lichchhavi period we find that the institution of the *Guthi* was developed to assure institutional and financial sustainability of activities of community scale. For Patan, the importance of Bungamati as its source for water for agriculture as well as urban uses was driven home to the citizen through the institution and popularization of the *Matsyendranath* festival. As the urban growth continued on in the Malla period, several new urban cultural elements were set up and they tried to ameliorate problems that were only natural in urban areas with increasing size, heterogeneity in socio-economic standing and limited waste absorptivity. These were successfully moderated through the incorporation of the *Asta-matrikas* and *Dasa-mahavidhyas* to delimit and bound urban growth, of the *Ganesh* and zoning by *Jaat* principle to create homogeneous neighborhoods in otherwise heterogeneous town, of the *Sithi* to keep the city public facilities in good repair, of *Luku-Mahadeo* to clear garbage from the *Sagah* dump sites and of the *Lachchhi* and the *Khyo* to create perpetual open and green spaces in town.

The end result has been *sustainable development* of cities over centuries. Not only the practices show ecological, economic and environmental sense but we also find that each activity included components applicable to each of these areas. These have been critical in ensuring economic, social and environmental sustainability in town function.

By wrapping the cultural practices around religious beliefs and faiths, an assurance of general acceptance of the activities was built in. Legends and folk stories were apparently thought out to strike a religious chord although all of them seem to have had fairly mundane end result objectives. For a population seeped in various religious thoughts, this seems like a crafty manipulation of cultural practices to attain harmonious acceptance and gain general popularity. God images such as Ganesh⁷⁹, Basundhara⁸⁰ and Luku-mahadeo⁸¹ were sought out or even improvised for the purpose. Clearly, the municipal managers were using ‘religious faith’ of the people as a vehicle of implementing their plans and programs. It is precisely because of the use of rituals as a tool of implementation that the festivities continued to yield expected behavior and results over a long period of time spanning several generation. Coached in religion, the activities sustained as long as the god images themselves continued to rule the hearts and minds of people.

It can be concluded that cultural practices tied to the concept dearest to the society at any moment and adapted as newer concepts gain popularity sustain most and also contribute to the sustainability of the town if linked to actions designed to resolve urban problems of resources and waste. The past of Patan shows that this was done through the Lichchhavi and Malla periods but failed to be adapted afterwards – leading to not only loss of culture per se in modern times but also to unsustainable towns.

⁷⁹ Ganesh seems to have gained stature as a major deity of the townspeople around 12-13th century at the beginning of the Malla period, although worship of Ganesh as a minor deity in Hinduism is a much older practice.

⁸⁰ Bajrayana Buddhism incorporated Basundhara as Laxmi/ Sri-Laxmi equivalent. The concept was similar to a still older symbol of earth-mother.

⁸¹ Luku-mahadeo, the hiding Mahadeva, is mentioned in the *Purana*. Puranic period in Kathmandu valley must be seen as post-Lichchhavi or even early Malla, as we start finding written documents called Puranas.

For now also, our cultural practices need to be adapted to arrest unsustainable moves towards as evidenced by failing resource base, growing waste accumulation and social discord. However, culture can be creatively used and adapted only on common grounds that would be loved from the bottom of every one of our hearts.

Present Moves at Transforming and Creatively using Cultural Heritage

The cultural practices, which had so far successfully maintained urban life in Patan, are now languishing. Such a situation appears to have been caused mainly by (a) gradual erosion of religious beliefs and their conversion into mere rituals, (b) the growth of other sectors of economy, reduced importance of agriculture and consequent change of profession in the farming group and (c) the dwindling traditional crafts with the fall in internal demand for its products. As a matter of fact the above factors may be seen as two faces of the same coin: the changing economy. With the Shah unification of Nepal, the wide agricultural base of Patan and commercial activities got reduced and Patan was left with its limited domestic craft industries. Unfortunately its cultural practices had not nurtured this aspect of the economy consciously. Consequently, Patan started to decline and urban degeneration set in.

Creative use of culture to bring about community participation in managing the environmental and waste problems of the present and in circumventing the problems themselves, have been relatively narrow in Patan in modern times. The cultural practices of the past are only being revisited recently for possible adaptations and adjustments.

In the last ten years or so, creative transformation of cultural heritage of Patan to affect overall sustainability is gaining strength in three particular areas. Whereas for the people, the impetus towards these has been a possibility of direct economic gains, for the city managers these areas have provided foci to purposefully direct institutional efforts for the larger sustainability of the town itself. These areas are (a) cultural tourism and resurgence of domestic craft industry, (b) heritage conservation as part of the city development strategy, and (c) community participation in conservation and in operation of local

The Mahadeva hiding under the garbage is however a local innovation and must belong to late Malla period, when garbage in towns would have assumed unhealthy proportions.

community heritage, facilities and services. While cultural tourism has been used as a tool of economic development and a source of municipal revenue, it has also contributed significantly towards generation of employment and augmentation of personal income of residents of the city. What is more important for Patan is that cultural tourism has generated employment in the traditional skill sector along with the modern sectors. The surviving family trades, particularly metal crafts and painting, have got a new lease of life due to tourism and souvenir sales. Policies and actions appear guided to create a distinct cultural identity of Patan as a city of monasteries⁸² and metal crafts. For about a decade now, Patan, with international assistance, has embarked on a program of development and conservation. The mode of implementation of this program is largely community based. This approach has incorporated measures to transform the earlier form of cultural participation (*Guthi institution and actions*) into a modern mould of community participation in creating ownership of cultural heritage as well as development inputs.

In effect, singly or as a whole, they show constructive creativity in the use of 'cultural heritage' for the purpose of (a) economic development (*income, employment, revenue, etc*), (b) social development (*cultural revival, cultural identity formation, etc*) and (c) political development (*local governance, decentralization, etc*).

Cultural Heritage Tourism

Using Heritage as a Commodity Resource:

Nepal's marvelous natural attractions such as the highest mountain of the world, Mt. Everest and pristine highlands and tropical lush forests in the plains within its small territory are matched by an equally marvelous asset of cultural heritage. Ever since 1951, international visitor interest on Nepal has been growing unabated. In recent years, this has attained such proportions that tourism earnings make a significant portion of the total national earnings of foreign exchange. Cultural heritage tourism (CHT), or "travel concerned with experiencing the visual and performing arts, heritage buildings, areas and

⁸² The contribution of the present Mayor Buddhiraj Bajracharya should be recognized specifically for this identity development.

landscapes, and special lifestyles, values, traditions and events⁸³, has come to be a major industry in Nepal today. With the recognition of this heritage as “unparalleled in the world” by UNESCO through listing of seven monuments zones, including Patan Durbar Square, as the Kathmandu Valley World Heritage Site in 1978, Patan’s CHT has got an added impetus.

At least one fourth of total tourist arrival in the country visit Patan every year. Visitors to Patan today total about 100,000. Since the beginning of this year, a tourist entry charge⁸⁴ has been levied to visitors to Patan and the money is deposited as “Heritage Conservation and Tourism Development Fund”. Apart from conservation of monuments and spaces, some of the earning will be allocated for conservation of intangible heritage also.

For the first six months and a half, 51710 persons visiting Patan paid a sum of US\$ 107, 000. The peak arrival stands at 500 visitors per day and managers expect it to go higher as better facilities are created and monuments and spaces conserved. The city plans to top off the earnings by a further 50 per cent from other sources and spend a sum of US\$ 430, 000 this year for conservation and enhancement of cultural property in Patan⁸⁵. For Patan, CHT has become not only a tool for economic development but also a means of maintaining its past and improving quality of life of the community.

S. No.	Month, 2000	Visitors from SAARC region	Visitors from Other Countries	Total
1	Jan 1- Jan 15	555	1361	1916
2	Jan 15 - Feb 15	410	3025	3435
3	Feb 15- Mar 15	558	4999	5557
4	Mar 15- Apr 15	1434	9893	11327
5	Apr 15- May 15	3584	9418	13002
6	May 15-Jun 15	6534	4131	10665
7	Jun 15- Jul 15	3277	2531	5808
8	197 days	16352	35358	51710

Table 1: Visitors to Patan, January 1 to July 16, 2000

⁸³ Jamieson, Walter. 2000. “The Promotion of Culture and History in the APEC Region”, APEC Seminar, Manila, June 2000. Unpublished, author’s copy.

⁸⁴ The charge is about 35 cents for visitors from SAARC countries and other visitors pay about US\$3.

Other than the city entrance fee charged by the Municipality, the Golden Temple (*Hiranya Varna Mahabihara*) also has been charging a small entrance fee of Rs 25 to the tourists since 15 December 1998. This fund is managed by a committee of the monastery.

Although, earnings made through tourism, directly or indirectly by individual city dwellers has not been officially quantified as yet, as an employer, tourism seems to occupy the fourth position, after commerce, agriculture and industry. Such a conclusion is drawn from a small research survey⁸⁶ conducted in major tourist frequented streets of Patan to assess businesses associated with tourism, number of citizen directly employed by the trade and their approximate earnings. This survey is generally contained within the traditional sector of the town i.e. the areas between Kumbheswor in the North, Mahaboudha in the East and Pulchowk in the West. It is estimated that the surveyed businesses cover about 85 per cent of the total.

Individual Capitalization of Cultural Resources:

Apart from the tourist visa fees and entrance fees, tourism as a consumer of cultural heritage, artifacts and skills also contributes indirectly by providing employment and business to the private sector and the community at large and has become a new means of economically sustaining the city.

Hotels, Restaurants and Travel Agencies:

The first ever hotel of Patan, Hotel Narayani was established in late seventies. At present a total of nine hotels and guest-houses provide accommodation facility of 690 beds to different class of tourists. Whereas Hotel Himalaya, Hotel Summit and Hotel Narayani provide facilities of higher international tourist standards, the Mahaboudha Guest House and The Third World Guest House provide accommodation amid the heritage setting itself. The latter type of accommodation has been growing with the saturation of Kathmandu's medium class tourist places as Thamel. However, as peak tourist season is limited to about six months, three months each in spring and autumn, the occupancy rate in the hotels round the year is not more than 40per cent. This underscores not only the

⁸⁵ Personal interview with Mayor, July 28, 2000.

⁸⁶ This supporting research for the current study was made by Dilendra Raj Shrestha, president of Patan Tourism Development Organization, a NGO of Patan. His contribution is thankfully acknowledged.

need to promote tourism in lean periods but also of extra effort in bringing tourists to stay over night in Patan. The hotels, now, provide employment to about 750 persons. Even though this is not a significant number, it is observed, that the smaller hotels in the city core of Patan employ more local people as a percentage of the total.

Patan Cafe was started some fifteen years ago, the first restaurant to be explicitly targeted to tourists. As the number of tourist arrival in Patan increased, several more restaurants have been established. Today seven of them provide a variety of foods from Continental to Nepali. Some of them also serve typical Newari food like *Bara*, *Chhoyela* etc. These restaurants have been able to generate employment for about 90 people, of which 21 are local to Patan. The restaurants are not utilized to capacity. The situation underscores the need to extend tourist attractions within Patan.

Only five travel agencies operate out of Patan handling a small number of tourists as many travel agencies and tour operators are concentrated in Kathmandu close by. Substantially high rent and shortage of rental space there is the key reason behind the travel agencies being located in Patan. (Annex: PTDO.1)

Workshops:

With the fame and skill of Patan, making it synonymous to the City of Fine Arts and the House of Artisans, the quality of handicrafts produced in Patan is rated highly by tourists. The ancient method of metal casting, the “*Lost Wax Process*” is still used in making metal statues in Patan. Along with bronze and copper statues and statuettes, hand carved wood and stone items are popular as souvenir with visitors and tourists.

As most of the handicraft works are made through skills inherited from the ancestors, specific workshops are located in specific areas (*tole*) and almost all are family managed. Metal casting and carving works are done in Mahaboudha area. Likewise stone carving is done in Chapat and Bhinchhebahal area. Apart from the products, the workshop and the work process have also acquired a heritage dimension to become attractions to tourists used to mechanized production. Other skills like woolen carpet weaving, Thangka painting, Aquarel Painting workshops are scattered across the town. (Annex: PTDO.4)

Handicraft Stores:

Apart from the workshops sales outlets, several handicraft stores dot Patan's tourist frequented areas and are an ever-growing phenomenon. Alongwith metal statues (bronze, copper, brass and silver) and wood-carvings, the initial items, more and new items, such as, woolen carpets, dresses, paintings (water color and traditional Paubha), Pasmina shawls, handmade paper products, paper masks, post cards, stone carvings etc. have been added to suit tourist liking and budget. Most handicraft shops are concentrated in the Durbar Square area, where almost 90 percent of all commercial spaces have been converted into handicraft shops already.

Like the workshops, most shops are small enough to be family managed and provide additional income to the traditional resident. Silver handicrafts, Water Color and Thangka Paintings and Woodcarvings seem to be the best selling items. The monthly sales turnover in these shops vary, the highest turnover reaching as much as Rs 450, 000 in some cases.

Raw materials supplies to these shops come mostly from within the valley and provide additional employment. Almost all of the metal craft items sold in Patan or other places in Kathmandu, are supplied by workshops in Patan itself, whereas about 80 percent of wood-carvings come from Patan and rest from other part of the valley. Also cent percent of the stone items come from within Patan. (Annex: PTDO.2/3)

Tourist item peddlers (hawkers):

Alongside the regular handicraft shops, there are quite a number of hawkers seen in the main tourist spots such as the Durbar Square, the Golden Temple and around the bus stops at Pulchowk and Patan Dhoka. They sell wooden or bone-made ornaments, passport bags, flutes etc. The hawkers, mostly women or children, are estimated to number around 100. Although, they provide a service much needed as a relief to the tourist, it is felt that they should be allowed to sell their things within a specific area only and so that it does not become a harassment.

Creative Use of Skills and Culture: Product Adaptation

Developing Contemporariness in Cultural Products

The practice of Arts and Crafts was at its peak during the late Malla period. It was competition among the kings of Kathmandu, Bhadgaon and Patan that resulted in profuse addition of beautiful temples, community buildings, shrines and monasteries, etc., and an extensive demand of crafts products. Recruitment of craftsmen from Patan to other parts of the country by then rulers had retained craftsmanship within Patan. After a gap of three centuries, growing tourism and the appreciation of traditional skills by the tourists is playing the same role and craft has once again become a source of inspiration and income. In the area of traditional crafts and arts, therefore, the capitalization of cultural heritage has been accompanied with evident advantage to the traditional economic sector. Through creative innovations on their cultural products and adaptations, the traditional craftsmen and artists are further capitalizing on cultural tourism. Traditional painting has found a new expression and several shops located in the Patan Durbar area frequented by tourist display a collection of new water color painting depicting scenes of local life style. Souvenir and craft shops in the tourist frequented sections of the town as well as traditional workshops of the metal and wood workers in town and in Patan Industrial District provide a significant array of new products directed towards the tourist market and exports. To a minor extent, these innovations have also created a domestic consumer market.

The key crafts and skills that have been creatively experimented upon by the traditional skills sector are bronze, brass and copper working, paintings, *thankas* and *paubhas*, wood carving, rice paper crafts and gold and silver jewelry. Products ranging from watercolor paintings, chess-boards and pieces and note-books to lamp shades, miniature carved windows and temple lions, etc. show a wide and varied innovative adaptation.

A very large Tibetan refugee camp that was established in the sixties in the south-western outskirts of the old core of Patan has now become its important part in terms of craft

products. Carpets produced in this area have a significant market in European countries and provide a vibrant economic base to Patan.

Cultural identity Formation

Revival of Monasteries:

Wide competition between Bhadgaon, Patan and Kathmandu for CHT and the growing popularity of Bhadgaon as a cultural city, Patan is making conscious efforts to form its own distinct identity as a town of Buddhist Monasteries. With as many as 166 monastic establishments or their shrine remains and the largest and most active ones of the valley located in the city, Patan can rightfully claim to be a town of monasteries.

In physical terms, quite a few monasteries have turned into residences and workshops of the family of the last '*Thapaju*', leaving only the main shrine, some religious elements in the courtyard and occasional rituals to remind one of the Buddhist monastery. Despite the generally degenerate status of the traditional *Guthi* as well as the *sangha* of many monasteries, the Buddhists of Patan are still a better organized group than of other towns in the valley. A revivalist trend in religion is evidenced by the strong and colorful participation in several festivals such as '*yala-pancha-daan*', '*mataya*' and '*baha-puja*'. The growing participation in '*baha-puja*', worshipful visits to the monasteries, is particularly notable. Although they appear ritualistic, and sometimes also feared as having fundamentalist tendency, they are rightful cultural expressions and help strengthen the identity of Patan. One of the first monasteries to have been 'reconstructed with modern grandeur and functionalism', the Yakhsewor Mahavihar, is a matter of pride for Patan. The reconstruction of I-baha-bahi monastery with Japanese assistance is a notable conservation work in Patan.

Like the newly conserved monastery of I-baha-bahi, some other monasteries with reduced religious activities, have also been adapted as school for local children leaving the shrine and the *agam* room for religious usage as occasionally needed. This adaptive use as school should be seen as a creative manipulation of its traditional role of Buddhist

learning. Architecturally, the form and design of the monastery suit this new function quite effectively.

Moderating Heterogeneity

Revival of Festivals

Like the Buddhist festivals, several other festivities have also gained wider resurgence. About a month ago, the festival of Bhimsen was celebrated with a gayety and participation unseen in recent times. Interviewees among general residents along the festive route expressed the feeling that the festivals and their revival have improved the quality of life in Patan. Similarly, cultural programs with a mix of traditional musical and dance presentations and modern interpretations, particularly in the Patan Durbar Square area, have increased in frequency. Residents have donated generously to offset the cost of such festivals. Along with the traditional *guthi* positive growth of participation of secular community clubs in the management of religious events has been observed in the past few years. The later has helped in removing 'fundamentalism', if any, out of these. At the same time, such revival of celebration with participation of new groups have contributed to develop a critical level of feeling of togetherness.

Regular municipal allocations are made to top up *guthi* resources for organizing the cultural festivals also. LSMC has also established some endowment funds for festivals with small resources of their own. For example, last year LSMC provided about US\$ 6000 for *Mataya* festival, US\$ 2000 for *Astamatrika* Festival, US\$ 1500 for *Kartik Nach* Dance festival, US\$ 500 for *Buddha Jayanti* celebrations, etc.

Unlike in the area of crafts, secular performing arts culture has not been ably made into a tool for economic uplift of people. Attempts at inducing contemporariness in dance and music forms are just beginning to take place in some of the performing arts presentations⁸⁷. A few recently formed cultural groups have taken initiative to present

⁸⁷ One of the latest to be put up as a public performance in Patan Durbar square was 'Kumari ballet and Svarsudha music', 2000 Festivals Season. It attracted both the Nepalese and foreign audience.

traditional and folk dances shows. PTDO is attempting to revitalize unused monasteries and residential courtyards for music and dance performances as a new product in tourism.

Recreating Community Participation

Development along with Conservation

The land based Guthi system got a severe set back when a generalist Land Reform Act 1961 was enforced in Nepal. Although the primary intent of the Act was to recognize the tillers' right to land, it also nullified and eroded the resource base of the *Guthi* system. The problems precipitated by the Land Reforms Act was aimed to be resolved through the setting up of the Guthi Corporation in 1964. However, in the preceding century, only the land property of the major Hindu religious institutions and the associated *Guthi* had been preserved through royal interventions⁸⁸ and the Guthi Corporation was detailed to manage only these trusts. Problems within the act and inefficient management of the Corporation itself put a final seal on the fate of community led operation and conservation tradition. Heritage and associated socio-religious functions started to face worse days as the act had brought close to 85 per cent of the total heritage of the nation under the corporation. The poor management by the Corporation turned participation into a mere ritual affair.

It was quite obvious, given the large volume of heritage extant in Patan, that new efforts to bring about community participation in the management and operation of heritage were called for. The Patan Conservation and Development Program has been designed and implemented to recreate an atmosphere for bringing back community participation not only in conservation of cultural heritage but also to in other activities of development and management in city.

⁸⁸ Called *Raj Guthi*, these trusts were primarily set by the ruling class in earlier historical periods. They were re-notified with certain additions and deletions during the early Shah period.

Patan Conservation and Development Program (PCDP)

This action program⁸⁹, financed under assistance from Federal Republic of Germany and implemented in Patan between January 1992 and June 1998 primarily sought to integrate conservation action and needs of the heritage of Patan to its developmental needs. This integrated approach was primarily an expansion on the experiences gained from the fifteen-year-long program of conservation and development implemented in Bhadgaon. The program used innovative approaches to conservation and development works to evolve and use participatory process. The mode of operation of this project is very much like a 'light reinterpretation' of the traditional community participatory management of urban elements, spaces and activities ensconced in the *guthi* practice.

Working within a city scale program framework that included documentation of heritage, preparation of area and problem specific action plans incorporating development needs, institution building, capacity strengthening and awareness generation activities, its every activity became a forum of participation of public and private sectors in conservation and development. To facilitate the involvement and development of capacity of municipal and neighborhood level institutions, the donor agency took a back seat.

By integrating conservation of built heritage elements and spaces with development works and expanding it further to embrace other aspects of urban management, the Patan Conservation and Development Program infused relevance to living into conservation action. The usual conservation of monuments alone had led the community to think that conservation was for CHT or joy of the travelers from far away lands and PCDP approach showed that the benefits of conservation could accrue as much to the people.

Patan Sub-Metropolitan City Office led the group of participating organizations that included Department of Archaeology, Department of Urban Development and Building, Ministry of Local Development, the local community and several non-government organizations (NGO), both international and local.

⁸⁹ The program ended June 2001.

The identification of activities, details, their timetable and implementation mechanism were left to the participating institutions and the beneficiary groups. Participatory processes, development and follow-up of improved working styles to reach commonly accepted objectives rather than outputs were used as success indicators. To ensure that actions sustained after the 'project' officially ended, the program was embedded in related existing institutions and sought to add to built-in sustainability. A mandatory community contribution towards the cost of the activity was required to assure sincerity of participation and seriousness of purpose in the activity itself. Both the identification process and contribution requirement lend a unique aspect to the program.

Components of the Patan Program

Initial focus of the program was on documentation and inventory of cultural heritage, primarily of the built components, that was seen as a prerequisite to safeguard the heritage of Patan caught in the process of new physical development. Documentation was done of Buddhist and Hindu monuments such as the Bahas, Bahis, Chaityas and Temples and other secular monuments including Hitis (step-wells), Dabulis (platforms), Inars (dug-wells), Jharus (water tanks), Pukhus (ponds), Patis and Sattals (pavilions and rest-houses) etc. A Guidance/ Strategy plan incorporating key environmental, development and investment concerns was prepared to provide an overall planning framework. The documentation was used as an official inventory and a 'community listing of property' providing a basis for preparing local area conservation and development plans. Several detailed action plans ranging from traffic re-organization in the city core area to conservation, development and management of sites of historical and architectural importance were then prepared. In order to safeguard the cultural environment, including streets and street embellishments, 'Building Control Component' prepared appropriate by-laws, building designs, building permit mechanisms, construction supervision, etc. for larger application by the town. The projects included restoration of monuments, rehabilitation of important public places, Hitis and ponds, etc.

Pilot projects were designed with two components, a turnkey component and a replication component to be undertaken by existing institutions. The turnkey component

was designed specifically to generate awareness among the people for conservation and particularly for demonstrating the desirable quality of work and approaches necessary for conservation and development, and to train the craftsmen and technicians accordingly. Pilot Projects included both conservation and development related projects. Several small works needing emergency interventions were designed as a separate component called 'Emergency Repair of Monuments'. Like the Pilot Projects, Emergency Repair program was also designed with a turnkey element and replication action. Under the Emergency Repair program more than 60 major and minor repairs have been carried out. Traditional Hitis (water conduits) and Pukhus (ponds), some as old as 400 years, have been rehabilitated and now used to supplement the water supply system of Patan. Due to the overwhelming participation from the community, this type of support has been continued into the follow up phase.

Integrated Neighborhood (Toles) Improvement Program component sought to mobilize locally available resources to plan and carry out basic improvement initiatives as the first step towards increasing community awareness and encouraging participation in development. Pilot actions were designed and implemented to provide a model for the entire Neighborhood (Toles) in Patan. The activities explicitly included development components such as installation of private toilets, solid waste collection and disposal, street cleaning, sanitation and health education campaigns, small scale repairs, eye care camps, informal education program, skill development and training etc. Integrated Neighborhood (Tole) Improvement Program was introduced in 1992 at Subahal in Ward No. 8. The ITIPs are now being implemented in 32 Neighborhoods (Toles). Within the framework of this program, 485 individual toilets have been constructed and 359 *sagahs* (semi-private waste dumping yards) have been rehabilitated.

What is sustaining after the Project?

Since 1993 through PCDP, more than US\$ 1 million has been spent in a variety of conservation and development works in Patan. The various institutions set up or activated have been operating as regular outfits now, with finances from the government, municipality and/or community. The PCDP Steering Committee is functioning without

any external support and continues to provide an umbrella for coordinating the activities especially related to the conservation of monuments and sites. The Community Development Section of Patan Sub-Metropolitan City is operating well regularly organizing coordination meetings with donors and NGOs involved in the development of Patan. The Patan Durbar Maintenance and Supervision Office in Patan, a branch of the DOA, and the Patan Sub-Metropolitan City are engaged in meaningful sharing of responsibilities in Patan. At the community level, 32 groups have been formed and are working with the municipality together to manage conservation, development and social service programs with little or no support from outside.

The project has also significantly raised local professional capacity for developing conservation and development action plans. The quality of works produced have been comparable. The special study on Chyasa and the feasibility study of traditional water supply systems have been of remarkable quality.

At the initial stage of the program, it is interesting to note that local people of Patan and even the Municipal administration gave a very low priority for conservation action and little or no participation was forthcoming. The pilot activities were crucial in creating public appreciation for conservation as a tool towards neighborhood improvement. Public participation grew steadily and so impressively that, on the closing year of the program, local and municipal contribution exceeded GTZ direct inputs to component activities. The public contribution in small emergency repair activities were even higher, sometimes reaching as high as 70 per cent of costs.

Creating Pride in the Past: Adaptive Use

Adapting Traditional House as Tourism Infrastructure

The changing economy and perceptions have led many a traditional house to be replaced and reconstructed using new design and construction materials and methods, much to the detriment of the built cultural environment of the town. The general attitude towards the form and architecture of the traditional house has not been one of pride and concrete structures that have largely failed to empathize with the past are becoming commonplace.

As the change is often also associated with the inability of the traditional form to cater to the need of commercial space, it has been felt that one of the ways to demonstrate the usefulness and commercial viability of the house is to induce into them economic activities that can pay rich dividends purely because of its material design and form. With this in mind, under the support of UNESCO, PTDO and local entrepreneurs, three large traditional houses are being converted into Bed and Breakfast Facilities for tourists.

Such activities and facilities, while enabling tourists to observe and live in style similar to local people raising the feeling of international brotherhood, is, at the same time, expected to inculcate pride in the local people's perception of their life style and a better understanding of themselves.

In Patan, with the above and other cultural conservation activities, the popular participation in conservation of culture has grown remarkably. Partly due to the higher rentals traditional design and form of houses command from the ever expanding tourism and travel trade business and partly with growing pride towards culture, many a building in the tourist frequented places are in the process of getting a new veil of traditional façade. As a matter of fact, the latest house to replace an earlier building in the Patan Palace Square is a very attractive adaptation of the traditional form.

Adaptation of Pati, Sattal and Chapa

Pati - the community rest place, *Sattal* - the community rest houses and *Chapa* - the community center are like built ornaments of the physical environment of historical Patan. There are many of them still around. Patis are normally used for *Bhajans* (prayers) when located near a temple and this function is again slowly coming back, providing a live evening environment in the town. Today, following PCD program, most of these buildings are used and maintained by the community. Some like Lampati Sattal at southern part of the Durbar Square, Jhatapol Pati, Lalitapur Sattal at Jhatapole and a Pati in Pulchowk have been recently restored. Adaptation of some such traditional community buildings for modern purposes such as library, youth clubs or even bus stands have been observed elsewhere. (See Annex: PTDO.5).

Display of History and Cultural Artifacts In Royal Setting

We have discussed above how some of the Buddhist Monasteries have been put to use as schools for children. However, the most important traditional building to go for adaptive use is the third court of the Patan Palace itself. Called the Manikeshava-Narayan Chowk, this royal residence has been 'conserved' and 'reconstructed' to house a cultural museum of historical artifacts. Severely criticized by conservationists as flaunting international charters of conservation, but widely acclaimed by the general public as a meaningful and impressive adaptation, the Patan Museum has quickly become a priority spot for tourists and also an attraction of value to local visitors. The resources accruing out of entrance proceeds goes to the government of Nepal and is budgeted back to the museum⁹⁰.

NGOs and CBOs in Conservation: Patan gate Visual Improvement

The importance of culture and cultural heritage and their conservation in the sustenance of Patan has been recognized and seriously taken up by several Non-government and Citizen Body Organizations such as the Lalitpur Heritage Society, the Lions Club, the Rotary Club, etc. Several stone water conduits, temples and other community buildings have been conserved through their support and coordination. The Lalitpur Heritage

⁹⁰ Entrance fee charged with effect from October 28, 1997 is Rs 120 for tourists other than SAARC nationals, Rs 30 to SAARC nationals and Rs 10 to the Nepalese citizen.

Society raised more than sufficient public donations to totally clean, repair and seal the joints of the landmark temple of Krishna Mandir of the Patan Palace Square.

One case of joint community and institution action of interest is the Patan Gate Visual Improvement Program. What started as a simple class project of the students of architecture of the Institute of Engineering, it has developed into a demonstration project being implemented by community group, Patan Gate Committee, assisted by another NGO, the Patan Tourism Development Organization. The primer fund for the project, US\$ 9000, is contributed by UNESCO and it is expected that the municipality, the community and other development agencies will top the funds required to complete the improvement works and will bring back the visual environmental ambiance of the ancient gateway to Patan. Apart from leading to improved living of the local people, it is expected that Patan Gate will be a key entry point for tourists.

Patan Tourism Development Organization (PTDO): an NGO with a mission

PTDO, established in 1995 as a NGO by a group of people, directly or indirectly active in the tourism trade of Patan, is dedicated to tourism promotion in ‘a healthy manner without disturbing the original cultural and architectural fabric of the city’. It has since been involved in a variety of activities such as publishing guide-books, promoting alternative Heritage tours across Patan, organizing special music and dance programs, exploring new tourism products, converting traditional Newar houses into quality tourism accommodation as pilot projects, etc.

The adaptation of traditional Newari houses into quality tourist accommodation has been taken as a Project and is a major endeavor of PTDO. Gravely concerned “that the beauty and value of the traditional house was losing its full appreciation by the community and fast spreading fever of Cement Concrete construction fever is spreading like a contagious disease”, PTDO has identified a few excellent old houses and embarked on a program of supporting the owners of such houses in restoration and development so that they are adapted to suit the requirements of the tourists without disturbing its original value and promote them as quality tourist accommodations.

PTDO has so far identified three architecturally and historically important houses and its tireless effort in seeking funds to support has finally got the attention of UNESCO after 5 years. Through UNESCO, the National Federation of UNESCO Association in Japan (NFUAJ) has now provided US\$ 30,000 for Shrestha House, one of the three proposed house. Restoration of the “Shrestha House” at Kulimha is in process and estimated to be ready to serve its guests by next six months time. Likewise NFUAJ has also already approved the same amount of money for Rajbhandari house situated near Hiranya Varna Mahabihara at Kwalakhu.

It is hoped that with their commercial success, private citizens will be inspired towards more positive attitude towards their historical heritage and will be forthcoming to restore, keep up and adapt their traditional houses.

Conclusion

From the above discussion of the past and present ways of using culture for the sustainability of the city, we see several differences. Whereas, in the past, culture and cultural practices, seems to have been used to cause appropriate community behavior towards sustaining ecology, environment and social relationship over longer periods of time, the current practices relate to creative exploitation of cultural practices as resources by themselves and aim at immediate economic gains at the individual, community and institutional levels. Whereas the later approach has potential towards sustaining the cultural environment per say and its conservation, providing necessary resources for its own maintenance and other development works in town, its response towards environmental sustainability or waste absorption is limited. The reinstatement of the participatory process, albeit in a different garb as compared to the *Guthi* system, may provide limited sustainability across time – may to the next generation. As a commodity for tourism, the new approaches seem quite well worked. However, apart from the economic capitalization, community participation and reestablishing the past traditions as a respectable identity framework, in the area of environment and ecology, the thoughts as

well as gains are limited or non-existent. What seems warranted most is reforming cultural practices and establishing new transformed ones that follow the approach seen in the case examples of the past. The sustainability of Patan would gain greatly if culture could be used as a way of life fully interlinking economy, ecology, social structure and environment in a composite system.

Perception of historic environment as a simple legacy/heritage of the past is based on the presumption that there is a break between the past and the present. Its relevance to present times is then given a status of the proverbial 'grand father's clock' and tangible elements become historical monuments to be conserved for memory and tourism, the latter giving it a resource role. The presumed break in 'continuity of time' presupposes spatial, psychological and cultural distance of present man with those of the past man. This presumption would hardly be true about living cultures such as that of Patan and other Kathmandu valley towns. Idea and works of conservation of historic monuments or zones or even cities are guided by this concept of break and do not see historic environments as important constituent of the present life of a town and its inhabitants. As a consequence, the software of culture, the intangibles like rituals, festivals and social relationship, which links men to the artifacts, are left to languish. Indirectly thus the current mode of historic environment management has encouraged adverse community and individual behavior towards the ecological environment. Conservation as practiced today neither mitigates cultural degeneration nor help develop (taking it further) cultural processes. Providing for the needs of man in town may be a matter of economic investment but its sustenance needs to be approached through culture building processes and should continue it over the past cultural mechanisms. Internally guided regeneration and not externally supported revival should be the basis for creative use and management of historic environments.

Culture forming activities with objectives of social, resource and environmental sustainability should be sought to be implemented through mediums that are agreeable to majority or all of the society to ensure success. Such mediums must be able to cut across sectors and direct individual actions towards desired directions. Legal mechanisms used

these days rather universally, were developed in the western society with little cultural bearing of eastern societies. In countries where such law-abiding culture is not yet strong, actions mediated through legal arrangements alone have tended to fail. In historic Patan, ritual mediation was practiced and such an umbrella was not transgressed by the society, as it was seeped in religious beliefs. Precisely for that reason they sustained for generations. For Patan, where traditional culture still persists and is on revival track, moderated cultural mediums would still commands higher propensity to conformity as compared to legal provisions.

We may add that creative redefinition and development of historic culture and cultural practices could be used as mediums for managing changes more successfully than through mere legal provisions. For such reasons, over the past few years, the Department of Architecture of Institute of Engineering (Tribhuvan University) has been exploring ways of urban regeneration through the medium of cultural processes such as festivals or other surviving indigenous knowledge systems (such as related to water supply systems, local domestic industries, drainage and irrigation etc.) of potential relevance to physical planning. Guided by analysis of cultural practices and their visible strong respect for and ties with the valley ecology, we believe that conscious efforts at taking such cultural practices further will also help in restoring a sustaining interactive relationship between the people, their town and their environment. Starting with one or more of such processes and their spatial linkages as points of departure, efforts are made in these regeneration exercises to incorporate into them modern day needs and positive social practices (e.g. festival routes and their activation > school and children's play parade, open spaces > modern community sports and entertainment, etc.). The community response to these planning exercises have been very encouraging. We are more and more convinced that, for towns with dominant 'historic environment', use of cultural practices and processes can be a strong tool to tie up the current social disintegration as well as its resource and environment problems.

Commenting on the paper, Dr. Kano raised the need for the research to look at the cultural changes as well as revivals taking place therein from the perspective the rural hinterland, which any urban center exploits and dominates over. It would be necessary for any study of cultural sustainability of both the societies, urban and rural, to consider the changing relationship between the two. Therefore a wider perspective addressing the great changes happening on the 'plateau towns' vis -à-vis the low lying agricultural societies and villages and the growth of Kathmandu and Patan into one mass of Greater Kathmandu would be important to have before pertinent conclusions may be drawn on specific role of culture on urban sustainability. Likewise the need to overview the whole picture from the perspective of the "Newars" and that of the in-migrants, now in the majority, was also pointed out. Once the commonalities are identified in the perspectives, forces in action and prospects in the scene of increasing capitalist economy and public governance, from the consideration of both urban-rural, individual town-greater megapolis, traditional ethnic group- in-migrants, etc., one will be in a better position to envisage and provide for future directions in culture formation or deployment for the betterment of the urban/rural areas.

Dr. Choe opined that many societies had similar practices as brought out by the paper in case of Patan. From the ancient times, when the community property was managed in the scale of a neighborhood, to today, when we are living in much larger towns, there have been such changes that the kinds of practices identified in the paper are hard to maintain and it may be more worthwhile to look for parallel modern concepts. For example, the 'bounding goddesses' and 'bounded urban areas' could be compared with the 'Green belt' . From religious theories of urbanization and conceptual exercises, which has left an imprint in almost all the cores of the Asian cities, to the modern times, which has similarly brought about new but similar contexts into picture, one can agree that a comparative assessment of cities and cultures can be quite productive – but we must move next to discuss matters in comparable formats and indicators. There is a lot to be done there by all the four researches. Dr. Choe hoped that when the research is amplified for the next meeting in Korea, all of us will be able to project the picture within a pre-agreed matrix and set of indicators.

Dr. Shrestha emphasized the need to look into lessons from the past that have current applicability and cultural sustainability should be based on strategies rather than products. It means that the studies should delve deeper into forces of changes that will help chart strategic options. Conservation of culture from the point of benefit to people rather than a product for tourists only can sustain.

Dr. Ensidel commented that many of the practices exposed by the study will be difficult to sustain today. He also emphasized the need to increase citizen participation in urban decisions and to create settings and opportunities for such a process. The perceptions and conditions for such processes in city government and national government becomes very important to consider and change.

Dr. Contzen warned that overt practice of CHT could turn cities into 'open air museums' and needs moderation. Dr. Virappan commented on the need to have hard evidence to support the correlation between religious practices and the technical relevance as brought out in the paper. The way the paper analyses the cultural practices, there seems to be a possibility that cultural processes may be usable to better urban management. Kathmandu valley situation seems to be still potent for participatory social management of urban growth.