

# CHINA'S PLANNING ON BORDER INFRASTRUCTURE: POST 1996 CBM PERIOD

Bijoy Das<sup>1</sup>

*Rapid development of infrastructure along the Line of Actual Control (LAC) between India and China, as well as within the Tibet Autonomous Region (TAR) plays a decisive role in the strategic calculus of India. Despite numerous rounds of talks between India and China under the Special Representative(SR) mechanism, little concrete progress has been achieved in the direction of settlement of the boundaries. However, in terms of confidence building mechanisms much has been achieved including the 1996 CBM which promises peace along the border between these two important Asian neighbours. Unfriendly incidents like face-offs between the border forces and armies, allegations of border intrusions, and gradual build up of military on both sides of the border region suggest that the possibility of military confrontation is still alive between these two close neighbours. However, given the institutional frameworks which have been built overtime, the military confrontation has been avoided. Reports of China's rapid infrastructure development in TAR in general and its border regions contiguous to South Asia in particular, compel a country like India try to understand China's objectives for doing so. The more recent standoffs in Depsang in 2015 and subsequently at Doklam in 2017 are testimony to China's increasing confidence in dealing with the border issues through show of power and deployment of armed personnel on ground. This article takes an objective assessment of the infrastructure that China has developed in the Tibet region and how it is meant to give strategic advantage to China.*

**Keywords :** Tibet, China, Infrastructure, Tibet Development, Tibet Work Forum, Aviation, Hydropower, Trade, Tourism

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<sup>1</sup> Bijoy Das is former Research Associate of Institute for Defence Studies and Analyses(IDSA), Delhi.

## INTRODUCTION

It was on 03 Feb 1949 that Mao Zedong, before the liberation of China, shared with the visiting Soviet Politburo leader Anastas Ivanovich Mikoyan thus: “The problem of Tibet is not all that difficult to solve. (We) just can be rash or act in haste. This is because firstly, transport and communication is difficult, movement of a large army will be tough, problems of supplies shall also be many. Secondly, the ethnic problem, especially because the area is under the control of religion, to solve which requires time. It is essential that (we make) slow but steady progress, (we) cannot act in undue haste.”<sup>2</sup> Thus for the Chinese even at that point, the question was not of “to be or not to be” but that of “how soon and how fast”. Thereafter, in December 1949, two months since China’s liberation, while travelling to Soviet Union Mao instructs the Party Central Committee and its North-west Bureau, “As to sending troops to Tibet, the sooner it’s done the better. Else the night would be long and dreams many.”<sup>3</sup> Then again during his two-month long trip to Soviet Union, his only foreign trip in life, Mao telegrams the Party Central Committee, Marshal Liu Bocheng, Deng Xiaoping, Marshal He Long and the Party North-west Bureau on 10 Jan 1950, “Now Britain, India, Pakistan have all recognised us. This is good for sending troops to Tibet”.<sup>4</sup> Finally after some more similar communications and with disagreements on the 17 Point Agreement on peak, on 25 May 1951 the Party Central Military Commission issues the “Order on Sending troops to Tibet” and Marshal Zhu De writes his “Send Troops to Tibet, Consolidate (China’s) Defences”<sup>4</sup> Whether after 60 odd years the Tibetans and the world at large has reconciled to the “Peaceful Liberation of Tibet” is a moot question. But that the boundary between India and China’s Tibet is far from being reconciled is a fact recognised on both sides and beyond.

There is thus an academic need to study China’s infrastructure planning and development in its Tibetan border region with India. It is essential to understand how TAR, which is roughly the size of South Africa, has made its journey from 5648 km of roads in 1959 and has constructed nearly 70000 km of roads by 2015.<sup>5</sup> It is hoped that such a study would provide some

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<sup>2</sup> \*Song Yuehong; Troops to Tibet, Strengthening New China’s Defences; <http://www.tibetology.ac.cn/zh/component/content/article/389-2011-04-14-08-40-59/5680-2011-05-17-09-36-58?view=article&id=5680%3A2011-05-17-09-36-58&catid=389%3A2011-04-14-08-40-59;17-05-2011>

<sup>3</sup> Ibid

<sup>4</sup> Ibid

<sup>5</sup> \*Ma Xiaoqi, Zhang Miao; A History of Tibet’s Roads; People’s Communication Publishing House, 1999. Further inputs from different party documents show that the figure is going to increase substantially in coming years.

understanding of the Chinese strategic thinking, its rationales and objectives behind the oft reported strides that China has made on improving the infrastructure within its territory along the border region. It is also hoped that such a study would be an initial step towards gaining a subsequent clearer idea of the actual infrastructure facilities that exist and the ongoing and future projects that are in the pipeline within the Chinese territory. Such studies might also help the Government of India to carry out a holistic assessment of the kind of infrastructure development needed for its defences, for improving public delivery services, development of border and regional trade, bringing prosperity to the border people and enable sub-regional growth in this part of the world, possibly by synergising efforts of both the sides.

However, it must be said that owing to the hazards of our information age in general, and that of Chinese studies in particular, an element of bias might be perceptible in the database of the research. While there is considerable information on China's thinking and doing with regards to its civilian infrastructure in the border region, there is little or no primary open source information on China's military strategy on border infrastructure. Albeit, secondary sources have some amount of information, but most of that are dated or unverified by due citation. Since much of such information is in the classified domain of governments and privileged sectors like that of Image Intelligence (IMINT), this study has chosen to base its research mostly on open source stated primary and secondary material from China. A more detailed and objective study of the physically existing, ongoing and planned infrastructure would be attempted subsequently.

## **RESEARCH QUESTIONS**

Five research questions are addressed in this paper. First, which are the Chinese platforms for conceptualising the developmental agenda in TAR. Second, which are the various chronological stages of such agenda. Third, what have been the salient features of such strategies and agenda of development. Fourthly, what have been the recent developments and strategies in the specific sectors of defence, roadways, aviation, hydropower, trade and tourism. Lastly, what have been the stated and unstated Chinese objectives behind their developmental agenda in TAR.

## **METHODOLOGY**

Since this study is on China's declared strategies and programmes, textual material forms the bulk of source on which this study has been carried

out. Majority of such text are of Chinese origin and in Chinese language (footnotes marked with \*). It is common knowledge that today China is perhaps the only major country which classifies maximum data and information as State Secrets. Besides, whatever worthwhile is printed are mostly in Chinese and very little in English because of such classification, but also because of the laborious process of translation. Needless to say, these barriers to information not only make research more difficult, but also becomes a factor for misperceptions which is best avoidable. Thus, the textual material used for this study are in the form of Chinese government white papers, work reports, research papers, books, government manuals, statements, official media reports and reportage. Earlier works in English by various scholars were also referred to for literature survey. Some interviews were also conducted with officials from the Indian government agencies and the Central Tibetan Administration. A field trip to Dharamshala was conducted for the purpose of gaining the version of some indigenous people of TAR.

## **YEAR 1996 AS WATERSHED FOR THIS RESEARCH**

The year 1996 has been treated as the starting line for the period relevant for this research. The reason lies in the history of the recent past. After the Sino-Indian conflict of 1962 effectively froze bilateral relations for about a decade, a few positive developments made slow progress towards normalisation of ties. These included public and private statements by leaders from both sides, visits and interactions by officials and even foreign ministers.<sup>6</sup> However, lack of any understanding on the MacMahon Line continued to breed distrust and military face-offs like the Sumdorong Chu incident of 1986. It was in the wisdom of the leadership of both the nations that such avoidable mistakes started to mitigate with the December 1988 visit by the Indian Prime Minister Rajiv Gandhi who was received by Deng Xiaoping, a leader who changed the very course of China.

After that visit, a Vice Ministerial Level Joint Working Group was established to negotiate on the boundary issue and to find ways to maintain peace and tranquillity along the LAC. These efforts culminated in two agreements on specific confidence building measures (CBM) in 1993 and 1996 respectively.<sup>7</sup>

The latter and the more comprehensive agreement on Confidence Building Measures in the Military Field along the Line of Actual Control in the India

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<sup>6</sup> For details see Ranganathan CV and Khanna Vinod C; *India and China: The Way Ahead*; Har-Anand Publications; 2004; pp. 56-62.

<sup>7</sup> Ibid

China Border Areas signed in New Delhi on 29 Nov 1996 called for some very specific CBMs to achieve the goal of calm at the borders. These included mutually shunning military force (Article I); maintain sanctity of LAC (Article II); reduction, limitation, information exchange on border military forces, exercises and dangerous activities (Articles III, IV, VI & VII); and prevention of air intrusions (Article V). However, it must be said that the 1996 Agreement as well as its precursor of 1993 does not specifically mention anything about border infrastructure and exchange of relevant information. Neither do they sufficiently deal with border incursion on land although it does recognise the lack of a common understanding on the LAC (Article II) and the will to speed up the process of clarification/confirmation for a common understanding of the LAC (Article X).

Both the above agreements were further strengthened by two more agreements, viz. the Declaration on Principles for Relations and Comprehensive Cooperation of 2003, and, the Agreement on the Political Parameters and Guiding Principles for the Settlement of the Boundary Question of 2005. These reaffirmed the previous agreements and the political and will and process on both the sides, abjured the use of force, paved a way for a comprehensive package deal while maintaining the status quo of the LAC and peace and tranquillity along it. However, when a dispute needs five agreements within a span of fifteen years, but yet fails to arrive at any solution, it just indicates how deep the problem is.

Hence, in the face of continuous reports of China aggressively upgrading the infrastructure on its side of the border, coupled with the comparative lack of quality infrastructure in many areas of the Indian side of the border, it was only befitting that a study of China's strategy on border infrastructure post 1996 was carried out to study new developments, implications for India and make suitable policy recommendations.

## **HISTORY OF ROADS IN TIBET AUTONOMOUS REGION**

Access to the Tibetan plateau and arranging defences of its international borders in the south initially posed big difficulties for the Chinese. What added to Chinese worries was Tibet's age old ties with the Indian sub-continent and the relatively easier access routes through the Chumbi Valley in Tawang, present states of Himachal Pradesh and Uttaranchal and of course Ladakh. So improving transport routes was a priority for the Chinese since the establishment of the People's Republic and the subsequent occupation of Tibet by the PLA. Since 1951 roads approaching Tibet began to be built according to Mao's dictum of "Advance the troops

while building roads” and “Many roads to the Heart” i.e. Lhasa. The routes of this multi-directional military entry into Tibet were through Chamdo (in east) – Dechen (south-east) – Chayu by the PLA infantry; Xiangride – Yushu – Nangxian (north from Qinghai) by PLA cavalry and Ali (from Xinjiang in the west). These eventually became the major accesses by road to Tibet from China and remains till this day.<sup>8</sup>

This way between 1950 and 1954 the first two roads to Tibet were the Sichuan-Tibet Highway (now the G318 National Highway) and the Qinghai-Tibet Highway (G109). The Xinjiang-Tibet (G219), Yunnan-Tibet (G214), China-Nepal (part of G318) highways were successively built under the aegis of respective PLA group armies and units connecting Tibet with the outer world. Later various other key roads within TAR were also built linking them with the earlier highways. These were the Lhasa-Yadong (S204), Lhasa-Cuona (S202), Amdo-Shiquanhe (S301), Naqu-Changdu (part of G317), Lhasa-Purang (S207) and Linzhi-Nedong (S306) roads. By 1995 TAR had 22391 km of motorable roads.<sup>9</sup>

## **PLATFORMS OF DECISION MAKING**

Like all important decisions, those concerning TAR are also deliberated and decided in the National Party Congress held under the aegis of the Communist Party of China in which other democratic parties of China, non-political personalities, state institutions and important organisations also participate. However, a study of the Party Congress reports would reveal that they generally give the broad policy directions beyond which it is left to subordinate Party and state conclaves to work out the concrete plans, strategies, organisational structure and the timeframe of the development agenda in TAR. These subordinate forums are in the form of Tibet Work Forums, Five Year Plans, the Great Western Development Strategy and the like.<sup>10</sup> A study of the history of development in the Tibet Autonomous Region of China shall reveal that most of actual strategies have come out from the five Tibet Work Forums convened by the Central Committee of the Communist Party of China and China’s State Council. At times the agenda of Tibet Work Forums have been assimilated with those of Five Year

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<sup>8</sup> \*Song Yuehong; 17-05-2011

<sup>9</sup> \*Ma Xiaoqi, Zhang Miao; 1999

<sup>10</sup> The Great Western Development Strategy covers 12 provinces, autonomous regions and central municipalities in the backward west, north-west, south-west and mid-west regions of China with a total area of 6.85 million sq km accounting for 71.4% of China’s landmass.

Plans. Till 2012 five Tibet Work Forums have been held and they were in the following order:

First Tibet Work Forum	: April 1980
Second Tibet Work Forum	: February-March 1984
Third Tibet Work Forum	: July 1994
Fourth Tibet Work Forum	: June 2001
Fifth Tibet Work Forum	: January 2010

The salient policy features and outcomes of each of these Tibet Work Forums are as under: -

### **FIRST TIBET WORK FORUM – APRIL 1980**

- Central focus on bringing in prosperity and growth in TAR in a planned and phased manner (in line with the decision of the Third Plenary Meet of the 11<sup>th</sup> Party Congress to develop Tibet's economy)
- Building borders and consolidating TAR's defences,<sup>11</sup> adopting policies of exemptions (from agricultural tax, procedures and purchasals) and liberal treatment of the TAR population
- Special policies for the development and growth of the Tibetan population
- Strengthening intra-Party relations and communal harmony with Tibetan cadres and people in focus
- Damage control exercise against the harm caused by Lin Biao and the Gang of Four<sup>12</sup>
- To bring TAR's economy back on track from the earlier extreme Leftist policies

### **SECOND TIBET WORK FORUM – FEB-MAR 1984**

- Central focus on economic growth and the prosperity of the TAR population

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<sup>11</sup> \*Su Shan; Significance and Contents of the Centre's Basic Line and Strategic Orientation on Tibet's Development in the Fifth Tibet Work Forum; Tibet Development Forum; March 2010

<sup>12</sup> \*Ibid

- Focus on developing TAR's energy, communication and transport sectors along with agriculture, livestock, education etc.
- 43 medium and small scale projects planned. These included power plants, hotels, schools, small and medium industries, cultural centres etc. which laid the basis of TAR's economic and social progress
- Enhance outer opening up and internal interactions to neutralise causes of social unrest
- Continue the Two Constant Policies (on giving more rights on land and livestock) and the Two Mainstays (of family and market controlled operations of land, forests and grasslands)
- Rural economy starts to grow; TAR's economy starts to open from an "aided" economy to a "managed" one<sup>13</sup>

### **THIRD TIBET WORK FORUM – JULY 1994**

- A review of past experiences, TAR's difficulties and its advantages
- Fastening of economic development by concentrating both on growth and social stability (Policy of One Focus, Two Tasks & Three Guarantees)
- Improve infrastructure by making it an engine of growth (by channelizing the proceeds of the nationwide campaign of Aid Tibet into infrastructure development)
- Aid Tibet programme launched; various developed Chinese central municipalities, provinces, Chinese central bodies and centrally administered State Owned Enterprises mobilised to aid TAR
- 62 projects approved marking first major change in TAR's infrastructure sector. These included roads, communication, energy, water conservancy, urban infrastructure.
- Another 716 projects approved under the Aid Tibet programme
- Total investment of over 8 billion RMB in above-mentioned projects.

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<sup>13</sup> \*Ibid

- TAR accorded preferential policies in eight sectors (taxation, finance, investment, price subsidies, foreign trade, social security, industrial reform and agricultural & livestock)
- 9<sup>th</sup> Five Year Plan (1996-2000) reports comprehensive growth in TAR's economic and social indicators
- Total motorable road length reached over 20000 km; power generation capacity reached 358 MW.<sup>14</sup>

#### **FOURTH TIBET WORK FORUM – JUNE 2001**

- Policy of “Leapfrog Development” announced for TAR's economy
- TAR included into the “Great Western Development Strategy”
- Effort to promote basic social stability by the slogan “Durable Peace and Lasting Administration”
- 50 preferential policies announced in sectors including investment in sectors like power and basic infrastructure for village authorities and towns etc.
- 117 key construction projects approved with a total investment of 31.2 billion RMB
- The 11<sup>th</sup> Five Year Plan (2006-2011) also approved 188 projects.
- Schemes on poverty alleviation, healthcare, economic liberalisation, enhanced remuneration for officials (2.5 times of analogous Chinese posts) etc.
- Breakthrough in infrastructure especially with the opening of Qinghai-Tibet Railway
- Total Fixed Asset Investment during 2001-2009 crosses 110 billion RMB
- Environmental conservation included for the first time as part of “Fulfilling Eight Basic Necessities”.

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<sup>14</sup> \*Ibid

The Eight Basic Necessities and other programmes also claim the following relevant achievements:<sup>15</sup>

Road Connectivity	668 county headquarters and 4222 villages; 99.7% of towns/cities and 81.2% of villages were connected by roads (2006-2010)
Electricity Provision	670000 more population
Telephone Connectivity	85% of registered villages
Postal Services	80% of registered villages
Wider use of Solar Power, Photovoltaic and Methane gas appliances	

### **ACHIEVEMENTS DURING 1994-2010 (FOURTH TIBET WORK FORUM) & 11<sup>TH</sup> FIVE YEAR PLAN (2006-2010)**

The nationwide programme called Aid Tibet was launched after the Third Tibet Work Forum (1994). China's central government had mobilised 60 central Chinese bodies, 18 Chinese provinces/cities and 17 central state owned enterprises to assist 73 counties/cities/prefectures of TAR in terms of finances, manpower, technology and management. According to the July 2011 Chinese White Paper on the 60 Years of the Peaceful Liberation of Tibet, during the period 1994-2010 this aid programme carried out a total of 4393 projects in six batches with a total investment of 13.3 billion RMB. A total of 4742 outstanding officials were also sent to TAR to execute the programme during the same period.

As will be seen, during this period China claims satisfaction for putting in place a basic and comprehensive transportation network in Tibet comprising mainly of highways, railways, airports and tunnels. Noteworthy among these are the Galong La Tunnel and Motuo Highway bordering Arunachal Pradesh.<sup>16</sup> With that China achieved a milestone of sorts – Motuo was the only Chinese county till then that was not connected by road. Finally after five previous failed attempts, the Galong La Tunnel and Motuo Highway ended that isolation.<sup>17 18</sup>

<sup>15</sup> \*Ibid

<sup>16</sup> The name suggests that Galon La tunnel is located near a pass named Galong; an online search produces a location called Galong Si in the same area which is a bird's flight distance of roughly 70 km from the LAC.

<sup>17</sup> \*Li Dali; On Problems of Developing General Aviation in China's Far West; Journal of Xi'an Aerotechnical College; Vol. 26 No. 1; Jan 2008; China Academic Journal electronic Publishing House

<sup>18</sup> The Motuo Highway winds up northwards and finally connects to the G318 national highway at Bowo; its total length is 130 km and supposedly takes 5 hours and 48 min to cover that distance.

During 1994-2010 China also claims to have made considerable progress in putting in place an integrated three-dimensional transport network.<sup>19</sup> This comprises of railways, highways, airways, waterways and tunnels with a substantial amount of inter-connectivity.

The railway link is the Qinghai-Tibet Railway that was opened in 2006 with the status of an engineering marvel. Sometime in 2008, work started on extending the line westward to Shigatse (@Rikaze), the second biggest city in TAR as part of the 180 projects under the 11<sup>th</sup> Five Year Plan (2006-2010). The eastern extension would reach Nyingchi (Linzhi). It has been stated that both these extensions to the West and East would be completed by 2013-2014. Apart from opening the South-central belt of TAR, the railway would also make mining of Zabuyelite (Lithium carbonate; Li, CO<sub>3</sub>) or Lithium much more economical from Lake Zabuye.<sup>20</sup> Further in 2008, leaders of China and Nepal reportedly agreed in principle to extend the line to Zhangmu on the China-Nepal border opposite Nyalam from where it can reach the Nepalese capital Kathmandu. Speculation of further connecting that with the extensive railway network in India is also rife and eminently possible.

Roads and highways included the 53000 km of motorable roads existing in TAR by the end of 2009. These included the 05 national and 15 provincial highways, some mentioned above, as well as 375 feeder highways connecting 99.7% of towns/cities and 81.2% of villages of TAR.<sup>21</sup> In airways, China had built a grid of five airports with Gonggar (Lhasa) as the hub and Gunsu/Kunsha (in Ngari/Ali), Bamda/Bangda (in Qamdo/Chamdo), and Mainling/Milin (in Nyingchi/Linzhi) as feeder airports. Besides these, 93 airports have been converted into civil-military dual use airports throughout China during the 11<sup>th</sup> Five Year Plan (2006-2010) and another 06 airports would be converted during the 12<sup>th</sup> Five Year Plan (2011-2015). China has started to open its low altitude airspace (below 1000 metres) in a phased manner till 2015.<sup>22</sup> Besides, China was believed to have 23 airfields in TAR most of whom are for military purpose.<sup>23</sup> Subsequently, a PLA Daily claims that at least 50 airports have been built by one single PLA AF Engineering Division under China's Great Western Development Programme of which TAR

<sup>19</sup> \*[http://chn.chinamil.com.cn/xwpdxw/gnssxw/2010-07/19/content\\_4262074.htm](http://chn.chinamil.com.cn/xwpdxw/gnssxw/2010-07/19/content_4262074.htm)

<sup>20</sup> \*China Stock Network; <http://www.cnstock.com/index/cj/201107/1417327.htm>; 15-07-2011) (Lithium is used in batteries, cellphones, laptops, iPods and other electronic devices. China is currently the world's largest producer of Lithium-ion batteries.

<sup>21</sup> \*Report on Tibet's Social and Economic Development; 30-03-2009

<sup>22</sup> Volume 5 August 2011 China News Digest, Institute for Defence Studies & Analyses, New Delhi.

<sup>23</sup> Dawa Norbu; Strategic Analysis; July 1988; and, Swaran Singh; Journal of Peace Studies Vol. 8, Issue 1, Jan-Feb 2001.

<sup>24</sup> \*<http://www.gs.chinanews.com/news/2010/01-11/50611.shtml>.

is an integral part.<sup>24</sup> It has been reiterated time and again by the Chinese state that TAR has been the biggest beneficiary under the Great Western Development Programme.<sup>25</sup> <sup>26</sup> It would not be surprising then to assume that PLA AF has indeed built more airports under the dual use and western development programmes.

A single stretch surface water transport has been developed from Nyingchi/Linzhi to Mainling/Milin in 2006. This is a tourist boat ride through the gorges of Yalu Zangbo (Brahmaputra) River.

Unfortunately, nothing was found in Chinese sources about tunnels except the Galong La Tunnel which connects Motuo (on the Arunachal Pradesh border) with Bowo in Nyingchi/Linzhi. However, there is repeated mention in Chinese media reports that tunnels have been and are being continuously built in various parts of TAR.

This integrated “three-dimensional” transport network inter-connected with Road, rail, air and water transport is stated to serve sectors like trade and tourism.

Of the 188 approved projects of 11<sup>th</sup> Five Year Plan, 109 projects had been completed by 2010 with a total investment of 87.1 billion RMB. In total 165.6 billion RMB was spent under the fixed asset investments making the 11<sup>th</sup> Five Year Plan the period with the maximum investment and outcome in TAR’s history.<sup>27</sup>

Other relevant indicators of economic growth between 1994 and 2010 are as under:-

Total Fixed Asset Investment (1994-2010)	264.3 billion RMB	20% annual growth
GDP (2010)	50.74 billion RMB	12% annual growth since 1994
Per capita GDP	17319 RMB	
General Budget Revenue	3.66 billion RMB	20% annual growth for 8 consecutive years
Motorable roads (2010)	58200 km	Connects all County Headquarters and 80% of registered villages
Civil airports	5 (see map)	Gonggar (Lhasa) as hub; Pangda (Qamdo), Mainling (Nyingchi), Gunsa (Ngari), Peace (Shigatse) as satellites.
Air Routes(with facilities for night flying and direct flights)	22	

<sup>25</sup> \*China’s White Paper on the 60 Years of Peaceful Liberation of Tibet; 11-07-2011; Report on Tibet’s Social and Economic Development; 30-03-2009

<sup>26</sup> \* Deng Mingwen, Duan Guozhi; Strategic Thoughts on Tibet’s Economic Development – Reflections on the 10<sup>th</sup> Year of China’s Great Western Development Strategy; Tibet University; Tibet Science and Information Research Centre, Lhasa; Science & Technology in Tibet; 2010 vol.6 (207); China Academic Journal Electronic Publishing House

<sup>27</sup> \*China Stock Network; <http://www.cnstock.com/index/cj/201107/1417327.htm>; 15-07-2011

## **FIFTH TIBET WORK FORUM – JANUARY 2010**

### **Targets to achieve by 2015:**

- Perceptibly narrow down income disparities between Tibetan farmers/herders and China's national average
- Bring about a visible improvement in Tibet's basic public services
- Conservation of environment
- Make major progress on infrastructure construction
- Make concrete groundwork for building a "well-off" society

### **Targets to achieve by 2020:**

- Bring the per capita income of Tibetan farmers/grazers near to China's national average
- Make overall improvement in the people's living standards
- Bring TAR's basic public services near to China's average standards
- Bring about a comprehensive improvement in Tibet's infrastructure
- Effectively set up the environmental safety system
- Make visible progress in strengthening Tibet's economic self-reliance
- Build a more harmonious and stable Tibetan society
- Make TAR meet the targets on a "well-off" society

### **Other Notables:**

- Putting central focus on economic development on the basis of stability and growth
- Acknowledging that maintaining TAR's stability is a major problem and the way forward is to strive for unity between nationalities (i.e. between Tibetans and Han Chinese)
- Deliberation upon the nature of the "Dalai Lama Clique" and decision taken on the basic approach towards separatism and the "Dalai Lama Clique"

## Targets under China's 12<sup>th</sup> Five Year Plan (2011-2015)

- 226 projects approved under State Council's "12<sup>th</sup> Five Year Plan Projects for the Social & Economic Development of TAR" with an investment of 330 billion RMB.<sup>28</sup>
- Project under study: Sichuan-Tibet Railway. Work in the Sichuan sector has started in September 2009. Expected to complete by 2015, this 1629 km line between Chengdu and Lhasa through Pujiang-Ya'an-Kangding-Litang-Zuogong-Bomi-Linzhi would take 08 hours.
- To take the length of Motorable Roads to 70000 km (up from 58000 km). 2011 will be the year of road-building with an investment of 7.5 billion RMB.
- To make all national highways and major economic routes into bitumen roads
- Counties to be connected by roads capable of transporting petroleum products
- At least 60% of villages and towns to be connected by pucca roads
- Fasten the construction of a high speed key road network with Lhasa as the junction connecting with the nodes of Nyingchi/Linzhi (in East), Shigatse/Rikaze (in Mid-west), Nagqu/Naqu (in North) and Shannan (in Mid-east).
- Open the Dagrang/Daren Airport at an altitude of 4436 m in Nagchu/Naqu in north Tibet<sup>29</sup>
- Speedy construction of small hydropower stations, wind-solar composite power plants, transformer sub-stations and extension of existing power transmission lines.<sup>30</sup>
- Put in place an assured, stable, clean, secure, economical and sustainable power distribution system with hydropower as the mainstay and oil, gas and non-conventional energy as supplementary sources.<sup>31</sup>

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<sup>28</sup> \*State Council Information Office

<sup>29</sup> \*[http://news.xinhuanet.com/english/2010-01/12/content\\_12796690.htm](http://news.xinhuanet.com/english/2010-01/12/content_12796690.htm) dated 12-01-2010

<sup>30</sup> \*(Guidelines for Economic & Social Development Plan for Tibet during 12<sup>th</sup> Five Year Plan); Fourth Meeting of the Ninth Tibetan People's Congress; April 2011

<sup>31</sup> \*Ibid

- Construction of four major hydropower stations of a combined power generation capacity of 2.6 GW. These hydropower stations are to be built at Zangmu (near Gyaca, Shannan), Laohuzui (near Medog, Nyingchi), Guoduo (near Bayizhen, Nyingchi) and Duobu (near Chamdo) of which the first three are proximate to the India-China border region and are also located on the Brahmaputra River.
- Start developing solar energy with which TAR is endowed naturally. Build a national solar energy applied research and demonstration centre.
- Explore construction designs of small and large scale solar power plants.
- Strive for 160 MW power generation capacity utilising solar energy, photovoltaic and photothermal technologies.
- Promote the development and use of geothermal, wind, biomass energies.
- Strengthen grid constructions: complete the Qinghai-Tibet DC Network Project, integration of the Central Tibet Grid and North-west China Grid, expand the Central Tibet, Chamdo (Changdu) and Ngari (Ali) grid mainframes and the urban distribution grid, speed up the extension of main grids to areas inhabited by farmers and herders, expand the power supply network, improve voltage levels, power supply capacities and reliability.
- Proceed with the construction of multiple land trading ports and routes in the border region for the South Asia Overland Trade Corridor under the “One Route, Two Bases, Three Export Hubs” policy.<sup>32 33</sup> Use trade to connect TAR with China's domestic market, turn it into a conduit to South Asian markets. China also hopes to earn tangible results from such trade to materialise the policy of “helping the border region and its populations to prosper”.<sup>34</sup>
- Boost tourism and border trade which have minimum impact on the environment yet have considerable potential for generating revenue.

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<sup>32</sup> \*Xinhua report <http://www.ectp.org/article/zx/qtztc/201108/20110800012228.shtml> dated 05-08-2011

<sup>33</sup> \* Tibet Daily report [http://district.ce.cn/zt/138842/xbfm/gmdt/201109/27/t20110927\\_22725314.shtml](http://district.ce.cn/zt/138842/xbfm/gmdt/201109/27/t20110927_22725314.shtml) dated 23-09-2011

<sup>34</sup> \*Ibid

## DEVELOPMENTS IN DEFENCE SECTOR

The first sector relevant to this study is defence. As stated before, there has been no comprehensive statement or reportage from China on TAR's defences. Whatever has been attempted here is by going through news reports of developments which are largely local in nature. It is hoped that piecing them together would give them a more worthwhile picture of the matter.

A PLA Daily report of January 2010 states that China has constructed more than 10000 km of roads specifically for the defences of TAR's borders.<sup>35</sup> This was done through the cooperation between PLA and local civil authorities, the report states.

The same report states that 250 sets of monitoring equipment have also been installed at TAR's borders for real time border monitoring. Another report concurs by reporting that China has installed a "digital wall" using these monitors at its TAR borders and marine boundaries connected by OFC to their respective control centres. The latest piece was installed at Medog (Motuo) county opposite Arunachal Pradesh. This is part of a 4.7 billion RMB project of the PLA which was commissioned in 1994 after China managed to settle its boundaries with 12 of its 14 neighbouring countries. The PLA has set up a 25000 km patrol corridor along its borders and marine boundaries, over 7000 km of land border fencing and at least 3000 border markers, watchtowers, coastal guard equipment and jetties. Xu Guangyu, a retired general of the PLA stated that the monitors are capable of high-resolution all-day/weather services. Another Senior Colonel (equivalent to Brigadier) reportedly also remarked that with these monitors PLA has been able to provide humane working conditions to troops in the borders, all of whom suffer from blood and heart diseases due to high altitude and oxygen deficiency. The PLA has installed the monitoring gadget to fight against the "Three Evils" of separatism, extremism and terrorism which are posing a challenge to China's sovereignty. Similarly, they would also help Chinese authorities crack down on illegal activities like smuggling, illegal border crossing, trafficking of drugs and arms and also to improve the response time to sudden public unrests.<sup>36 37</sup> Another statement claims that Chinese border defence facilities in TAR have undergone a sea change across the board from discharge conditions of duty to training and barracks. Today, even the minor matters like visit by relatives and laundry are taken care of, it claims.<sup>38</sup>

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<sup>35</sup> \*<http://www.gs.chinanews.com/news/2010/01-11/50611.shtml>; 11-01-2010

<sup>36</sup> \*<http://mil.eastday.com/m/20100202/u1a49955860.html>; 02-02-2010

<sup>37</sup> \*[http://www.tibet328.cn/06/04/200903/t20090309\\_42181.htm](http://www.tibet328.cn/06/04/200903/t20090309_42181.htm); 06-04-2009

<sup>38</sup> \*<http://www.gs.chinanews.com/news/2010/01-11/50611.shtml>; 11-01-2011

The report on monitors is further buttressed by the report that Optical Fibre Cable laying was completed between Medog (@ Motuo) and Nyingchi (@ Linzhi) in September 2009. This OFC line is said to have connected 100% of all the Chinese border defence units of Company and above, each with 100 and above men in TAR's border. The services which have become available since are video telephony, remote monitoring, networking etc. It might be remembered that the Motuo Highway and the Galong La Tunnel was completed during the Fourth Tibet work Forum (1994-2010) and it seems natural that an OFC line would also be laid along with the highway. This is also supported by a memoir of Gen. Chang Wanquan, who was a member of the Party Central Military Commission and had headed the PLA General Armaments Headquarters.<sup>39</sup> He wrote about the following technological and scientific developments which the PLA has recently achieved at China's borders: -

- Round-the-clock visibility of key border areas
- Real time border administration
- Faster transmission of border intelligence
- Improvement of information warfare capabilities
- Enhancement of scientific and technical quotient among China's border defence forces
- Higher efficiency of command and control systems

Therein he also writes, "In order to build strong defences at the borders, it was necessary to strengthen the combat preparedness of the military. An integrated planning for building all arms of the military, the border defence forces and the reserve forces of the People's Militia was carried out. A centralised command system, a joint defence and combat system, a mobilisation system combining war and peace time requirements, matching battleground systems, war-like training facilities were all given shape. These have upgraded the combat standards of the border troops and have provided concrete guarantees for strong borders and able defences."<sup>40</sup>

The Qinghai-Tibet Railway (QTR) seems to be under regular military use. The first time QTR was used was right on 07 Dec 2006 when No. T22/3 train rolled into TAR with a batch of new PLA recruits.<sup>41</sup> Thereafter, the first time the PLA AF used the QTR was sometime in latter half of 2010 when unspecified but important combat readiness equipment was transported into

<sup>39</sup> \*Shi Lei ed.; Path of a Powerful Military Vol. 1; PLA Publishing House; January 2010

<sup>40</sup> \*Ibid

<sup>41</sup> \*<http://www.gs.chinanews.com/news/2010/01-11/50611.shtml>; 11-01-2010

TAR. The PLA AF has since set up a Tibet Military Railway Transport Supply Group to handle such consignments which has improved the supply capabilities of PLA AF in TAR.<sup>42</sup> The PLA AF is actually trying to resolve the problems of logistics and excess aircraft fuel consumption in TAR which limited its options to the deployment of the old J-7 fighters. It is because of these eternal problems that PLA AF has not been able to deploy the superior J-11 or J-20 in TAR. The third generation Chinese fighter J-11 reportedly succeeded in carrying out a live-bombing exercise in TAR for a duration of 8 hours. However, with the recent successful trial flight of J-20 in Chengdu, PLA AF says Tibet would also be covered within the radius of J-20.<sup>43</sup>

Perhaps a new disclosure is that new training centres with enhanced levels of Oxygen have been established in TAR. As of now, Chinese troops undergo training in these modified centres balancing between health and training standards.<sup>44</sup>

Mi-171 helicopters of Chengdu Military Area Command have also carried out its first sorties over the TAR. Similarly, a PLA paratrooper unit of 600 men reportedly carried out a successful large scale exercise recently by parachuting into TAR from upper atmospheric level. This unit is nicknamed Sky Soldiers and has been raised to respond to any contingency situation in TAR.<sup>45</sup> These demonstration exercise have been continuing and the most recent one was held in June 2017.

However, at this point it would worthwhile to glance at some possible shortcomings of TAR's roads. In a Chinese research paper its authors indicate that TAR's roads are not military grade and China should overcome that strategic flaw. Calculating the dimensions of a main battle tank, the paper states that width of a road should be at least 10.9 m. Similarly, calculating the load capacity of military roads, the paper says that TAR's border roads should increase their depth to 3.26 m, double that of normal roads. Also owing to the topography and climatic conditions of TAR, the life of roads should be improved so as to withstand the erosion due to temperature variation, precipitation, flooding etc. Similarly, TAR's bridges are also not of military grade, it says, and should be upgraded structurally and by concealment. Tunnels too should be able to withstand the impact of

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<sup>42</sup> \*[http://junshi.xilu.com/2011/0205/news\\_343\\_139138.html](http://junshi.xilu.com/2011/0205/news_343_139138.html); 05-02-2011

<sup>43</sup> \*Ibid

<sup>44</sup> \*Ibid

<sup>45</sup> \*Ibid

aerial bombing on their tops, suggesting that TAR's tunnels are vulnerable on that count.<sup>46</sup>

However, the same paper also advocates building highway-cum-airstrips in TAR. This is a technology which China acquired in Sep 1989 and should be put to use for relief operations and emergency transport in TAR, it says. China has issued a standardisation on this technology which is GJB 1859-945 Railway-cum-Airstrip Engineering Construction Standard 6. It further recommends other specific facilities which should accompany such airstrips.<sup>47</sup>

Another important aspect is the role played by the PLA in development of civilian infrastructure and nation building in China. According to an old Chinese adage: "Stability of the borders depend on military strength, and military gains strength from reclaiming wasteland"<sup>48</sup> Accordingly, the PLA and People's Armed Police Force (PAPF) have been mobilised to work on a wide range of social and infrastructure projects under the Great Western Development programme. Many units have also raised funds and made donations to bring up social projects. These also include projects in TAR.<sup>49 50</sup>

## ROADWAYS

Apart from the road projects already discussed above, there are some more which are being discussed in slightly more detail.

Lhasa will be connected to the Gongga Airport by a high speed expressway, another first for TAR.<sup>51</sup> Though not in the border region, it only shows the future direction of TAR's roads. Started on 28 Apr 2009 and nearing completion, this road will be built at a cost of 1.59 billion RMB with 123 bridges/flyovers/culverts of various sizes. The 37.837 km stretch would take 30 minutes to cross down from the present one hour and would be toll-free which again is a sop for the Tibetans.<sup>52</sup> Chinese expressways invariably have high toll rates which is a cause for public resentment.

<sup>46</sup> \*Liu Rui and Huang Xiaoming; Construction of Tibet's Roads and China's Defence; Vol. 30 No. 1; Feb 2010; China Academic Journal Electronic Publishing House

<sup>47</sup> \*Ibid

<sup>48</sup> 1 úV(WǎNuQǐ[yuQǐ[(WǎNo\0u

<sup>49</sup> \*Jiang Yanyu ed.; A Glory Over a Century: Growth of China's Defence and Troops in 30 Years of Reforms; Party Book Press; Dec 2008

<sup>50</sup> \* <http://www.gs.chinanews.com/news/2010/01-11/50611.shtml>; 11-01-2010

<sup>51</sup> \*China Stock Network; <http://www.cnstock.com/index/cj/201107/1417327.htm>; 15-07-2011

<sup>52</sup> \*Ibid

However, it's the South Asia Overland Trade Corridor (SAOTC) which demands a closer look. China plans to build it as a multi-modal transport network of railways, highways and airways. During the 12<sup>th</sup> Five Year Plan (2011-2015) it shall focus on building land ports for SAOTC. These will be at Kyirong (Jilong) as the point of entry and four others at Zhangmu, Pulan, Yadong and Riwu.<sup>53 54</sup> These ports are to be integrated with the "One Route, Two Bases, Three Export Hubs" grid.<sup>55</sup> A total of 190 million RMB was spent during the 11<sup>th</sup> Five Year Plan for the upgradation of the above land ports.<sup>56</sup> Shigatse (Rikaze) city, by virtue of its central position shall function as a logistic, training and information centre.<sup>57</sup> According to one assumption, the Chinese strategy on SAOTC is to make Tibet a gateway of trade between China and the South Asia. The primary plan for the near future is to enable TAR's neighbouring Chinese states pump their products into South Asia through the SAOTC. That way, TAR would act as the bridgehead for much of the Chinese economy.<sup>58</sup>

## AVIATION

A 2006 Chinese policy paper titled "A Study of the Development Strategy and Policy on General Aviation in Tibet" has recommended that by 2020 TAR should have an airport each in the 15 border counties contiguous with the South Asian countries. These airports would provide general as well as commuter aviation. Such services should cater to the transport, tourism, economic and trade requirements of TAR. They will also necessary roles for environmental conservation, emergency rescue, air tourism and short distance travel.<sup>59</sup> All the proposed airports are in different phases of development.

<sup>53</sup> \*<http://www.ectpa.org/article/zx/qtbztc/201108/20110800012228.shtml>; 05-08-2011

<sup>54</sup> Incidentally, Riwu already has two of the six trade points designated by the governments of China and Nepal. They are Olangchung Gola-Riyo and Kimathanka-Riyo. Nepalese Foreign Ministry: <http://www.mofa.gov.np/bilateralRelations/nepal-china.php>

<sup>55</sup> One Route = Qinghai Tibet Railway; Two Bases = QTR's Naqu and Lhasa Logistic Centres; Three Export Hubs = Zhangmu, Jilong, Yadong

<sup>56</sup> \*Tibet Daily; [http://district.ce.cn/zt/138842/xbfm/gmdt/201109/27/t20110927\\_22725314.shtml](http://district.ce.cn/zt/138842/xbfm/gmdt/201109/27/t20110927_22725314.shtml); 23-09-2011

<sup>57</sup> \*Tibet Network; [http://www.tibet.cn/news/2011index/201106/t20110620\\_1087829.htm](http://www.tibet.cn/news/2011index/201106/t20110620_1087829.htm); 20-06-2011

<sup>58</sup> \*Tibet Daily; [http://district.ce.cn/zt/138842/xbfm/gmdt/201109/27/t20110927\\_22725314.shtml](http://district.ce.cn/zt/138842/xbfm/gmdt/201109/27/t20110927_22725314.shtml); 23-09-2011

<sup>59</sup> \*Li Dali; Jan 2008

## HYDROPOWER

More than 400 hydropower plants of various sizes are under different phases of construction in TAR.<sup>60</sup> Once operational, these would have an annual power generation of 43 billion kWh, which would again just be 6.99% of TAR's total technical power generation capacity. TAR is China's water reservoir, also called the Third Pole; its per capita water availability is 152969.2 m<sup>3</sup> compared to China's national average of just 1916.3 m<sup>3</sup> (inclusive of TAR). Thus TAR's extreme water affluence contrasts severely with rest of China's increasing water deficiency and the problem of desertification in China's west. Whereas, due to global warming, ice cap and glacial melting, water levels of TAR's rivers and lakes are continuously rising since the beginning of this century. This has ominous consequences for lower riparian countries of the rivers Brahmaputra, Ganga, Mekong, Salween, Indus, Irrawaddy, warns research scholar Han Junyu. Thus he makes the case that it's essential for China to properly harness the hydropotential of TAR's rivers matching the contrasting figures of China and the lower riparian countries. He says there are 340 rivers in TAR each with a power generating potential of 10 MW and above. Of these the Qusong-Milin stretch of Brahmaputra's mainstream has a potential of 5000MW, Brahmaputra's Great Bend has a potential of 48000 MW while the proposed mega dam proposed at Motuo near the LAC would be China's and world's largest with a capacity of 40 GW which is twice that of the Three Gorges Dam.<sup>61</sup>

## TRADE

Trade is one of the principle sectors which will benefit from the Chinese infrastructure development and in turn would serve as an engine of growth. Lately, more and more local and unique products of TAR have been reaching the world markets. These include export of Caterpillar Fungus (*Ophiocordyceps sinensis*) from Linzhi to Japan, and Lhasa's barley beer to the US. Tibet's famous natural mineral water is also another major item which is exported using the Qinghai-Tibet Railway, production of which registered a 101.8% year-on-year growth in 2009. Similarly in 2009, one single company from Linzhi exported six tonnes of Caterpillar Fungus to Japan with a net profit of 157000 USD. Some other items of significant potential are TAR's local processed food items, Tibetan medicine, organic foodstuff and handicrafts.<sup>62</sup>

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<sup>60</sup> \*Han Junyu; An Economic Strategy of Exploiting Tibet's Water Resources – The Problem and Solution of China's Water Resources in the 21<sup>st</sup> Century; Journal of Shanghai University (Social Sciences); Jan 2011 Vol. 18 No.1; China Academic Journal Electronic Publishing House.

<sup>61</sup> \*Ibid

## **TOURISM**

Inbound tourism is fast picking up with improving infrastructure and new destinations. For example, tourism at Zhada (near Ali) has picked up due to access to the 10<sup>th</sup> century Tibetan kingdom of Guge. The Milin-Linzhi river tourism project is also a unique one. These are being integrated through the various modes of interconnected transportation facilities for end-to-end tourism packages. According to Wang Songping, Deputy Director of TAR Tourism Bureau, 5.56 million tourists visited TAR in 2009 bringing in a revenue of 5.24 billion RMB. By 2015 the number of tourists is expected to go up to 150 million.<sup>63</sup> Tourism to Tibet is also being packaged with Nepal and increasingly Bhutan.

## **CHALLENGES AND PROBLEMS**

China is coping with various problems in its mission to transform TAR and improve its infrastructure in the border region. Some of them are old and some less known.

Among the old and known issues, the bottleneck of TAR's infrastructure in itself is a huge challenge to overcome in order to carry out any large or medium project. Since any construction is linked with transport of men, material and equipment, their transportation to the sites of work, which are again virgin territories, is a formidable task to achieve during the course of any project. Even today, a PLA transport regiment of the Xinjiang Military District has to send at least 200 truckloads of military and civil goods every year to TAR through the Qinghai-Tibet G109 national highway also known as Heavenly Road in China.

The climate and topography of TAR are also known to be among the most inhospitable ones on the face of the earth. Any professional posted to a project in TAR has to factor this with personal health. Along with this is the cultural difference between the Han Chinese and the Tibetan population. Since development in TAR is entirely being carried out by entities from China's heartland comprising of Han Chinese, the difference between both these peoples in almost every major walk of life is a factor for contemplation for any Chinese professional who is posted to TAR. Coupled with that is the Tibetan separatist movement which at times poses serious security problems for the Han population in TAR.

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<sup>62</sup> \*[http://chn.chinamil.com.cn/xwpxw/gnssxw/2010-07/19/content\\_4262074.htm](http://chn.chinamil.com.cn/xwpxw/gnssxw/2010-07/19/content_4262074.htm); 19-07-2010

Also as stated above, the treacherous heights of TAR's international borders opposite India are taking a heavy toll on China's border defence forces. In Shannan, which is one of the bordering prefectures other than Linzhi in the east and Ali in the west, most of the areas patrolled by Chinese troops are located at altitudes of 5000 m or above. These areas reportedly have an Oxygen level that is just 40% of the normal Chinese standard. According to Dr. Li Suzhi, Head of TAR's PLA General Hospital who is also a Deputy Commander of the Tibet Military District, due to prolonged posting in these borders, 80% of the Chinese troops have serious Haemoglobin problems, while 100% of these troops suffer from high altitude ailments like high blood pressure, heart displacement etc. Lives get lost regularly due to such prolonged or sudden exposure.<sup>64 65</sup>

Tibet Military District in all has 27 border outposts located above 4000 m ASL. Of these up to 25 border posts get cut off in winters due to heavy snow. In order to minimise the occupational hazard of high altitude sicknesses, the PLA claims to have been able to formulate drugs and equipment that can cope with most of these ailments. However, the tougher task for the PLA is to maintain the uninterrupted supply of these drugs/equipment to each of these high altitude border posts and other establishments. This again calls for a well laid out logistics system which obviously depends on durable infrastructure facilities, mainly transport, which may still be eluding the PLA.<sup>66</sup>

Besides these, there seems to be other systemic problems which are hindering the Chinese planned pace of developmental activities in TAR. The writ of the central authorities does not seem to run as much in TAR. There also seem to be considerable lack of transparency and misuse of authority among the public offices of TAR. The industries and corporates also seem to be unwilling horses for the task.<sup>67</sup>

It also appears from some of the publications quoted here that there still is no unanimous strategy yet on the balance between environmental conservation and economic development for TAR. A clear thought on sustainable development in TAR seem to be still eluding China's leadership. On one end of the spectrum there are calls for aggressive exploitation of Tibet's unique

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<sup>63</sup> \*Ibid

<sup>64</sup> \*<http://mil.chinaaiiss.com/html/201110/10/a4140f.html>; 10-10-2011

<sup>65</sup> \*<http://mil.eastday.com/m/20100202/u1a49955860.html>; 02-02-2010

<sup>66</sup> \*<http://mil.chinaaiiss.com/html/201110/10/a4140f.html>; 10-10-2011

<sup>67</sup> \*Deng Mingwen, Duan Guozhi; 2010

natural resources like hydropower.<sup>68</sup> While on the other side are warnings that Tibet is China's water reservoir and the custodian of its ecological security. Hence, TAR's economic development should be subservient to its environmental conservation and TAR should be accordingly compensated from the growth and prosperity of rest of China.<sup>69</sup>

Another challenge which TAR is facing is economic in nature. At present TAR is suffering from the symptom of low economic capacity but a huge economic disparity between urban and rural incomes. This has become a major hump in synchronising TAR's development with the average development of China towards achieving the goal of building a well-off society by 2020. This is also reason why progress of major projects in TAR is not to the satisfaction of Chinese authorities.<sup>70</sup>

Lastly, though China is moving towards boosting domestic consumption in order to spur economic growth, that approach clearly would not work in Tibet with a population density of merely 4-12 people/sq km. Clearly, China has to put some other alternative to work.

## CHINA'S OBJECTIVES

- (a) Consolidation of the defences at TAR's borders – After the annexation of Tibet as part of Chinese territory this was the natural step forward, i.e. to end the fallacy of having a 4000 km defenceless border. Alongside, develop some key capabilities on the line of rapid reaction units to serve as effective deterrence and carry out combat contingency operations, which is in consonance with China's Defence White Paper 2010.
- (b) Strengthening administration and control over the Tibetan periphery – China's control over these border regions historically has remained low. Inhabited by Tibetans and other ethnic groups, these peoples were part of the "national minorities" of China who generally inhabit the periphery and not the eastern, central and southern cores of China inhabited by the Han Chinese. Likewise, Chinese administrative control and services in these peripheral areas have also been less than the core areas. Additionally, the Tibetan border regions present China with two major challenges – one, the ethnic separatist movement; and two, the nomadic lifestyle of Tibetan herders.

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<sup>68</sup> \*Han Junyu; Jan 2011

<sup>69</sup> \*Deng Mingwen, Duan Guozhi; 2010

<sup>70</sup> \*Tibet Academy of Social Sciences Report; <http://www.xzass.org/html/news862.html> dated 02-02-2010

In order to improve its control over Tibetan separatism, quicken their response time in contingencies like “mass incidents” or natural calamities, China needs its administrative machinery to reach the border regions and take suitable actions against undesirable activities. Wanton cross-border movement is one such activity which helps the sustenance of the separatist movement, or increases the potency of each public unrest, or allows passage to individuals which the Chinese administration might want to arrest or detain. It might be remembered how on the eve of Beijing Olympics Chinese authorities were caught completely unprepared to deal with Tibetan unrest from 14 March 2008 onwards. Since then Chinese authorities in TAR have been making steady progress to monitor and control such incidents. These include aerial survey capacity building for the police forces, training for which is given by the PLA Air Force.<sup>71</sup> For these the administration needs better infrastructure more than ever before.

- (c) Changing Tibetan lifestyle – Further, burdened with the responsibility of building a modern, civilised Tibetan society, China is trying to transform the nomadic agricultural lifestyle of rural Tibetans by settling them in state provided housing settlements. This is a change which many Tibetans detest. The Department of Information and International Relations of the Central Tibetan Administration criticises such “sedentarisation” which it says is harming the population, land and flora of TAR.<sup>72</sup> But irrespective of that, the fact remains that along with such houses basic infrastructure has to be built to connect these new settlements or for providing modern amenities to earlier disconnected villages.
- (d) Wean away the population from separatism – This is the panacea which China is banking on to work within the Tibetan psyche. Chinese authorities feel that by improving delivery of public services and transforming the quality of Tibetan lifestyle they can wean away the population from separatist aspirations.<sup>73</sup> This is again attempting an economic solution to a political problem. Ever since the Fourth Tibet Work Forum of Jan 2001 set the twin objectives of Rapid Development and Durable Peace (upgraded from the Accelerated Growth and Basic Stability of the Third Forum), durable peace became the pre-requisite for modernisation to happen. It was believed that stability would

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<sup>71</sup> China News Digest Vol. 2; Institute for Defence Studies & Analyses; May 2011

<sup>72</sup> The Impacts of Climate Change on the Tibetan Plateau: A Synthesis of Recent Science and Tibetan Research; DIIR 2009

<sup>73</sup> \*China's White Paper on the 60 Years of Peaceful Liberation of Tibet; 11-07-2011

overshadow all else including separatism. A Tibetan-Han common aspiration for development would act as the political rationale, precondition and basic guarantee for the materialisation of Rapid Development and Durable Peace. Three tasks were since identified to achieve a breakthrough in Tibet's development: accelerate economic growth, maintain social stability and strengthen Party's organisation.<sup>74</sup> Trade routes opened to serve as outlets for the manufacturing industries of provinces around TAR into the markets of South Asia. Use the geographical location of TAR to become a conduit of such trade and materialise China's policy of helping the border region and population prosper.<sup>75</sup>

- (e) Trade to bring prosperity – This is a vision that intra-regional trade between Tibet and South Asia would compensate for the perennial logistic difficulty for the flow of goods and services from mainland China into Tibet and vice versa. The Chinese long aspire to use Kolkata which is in fact the nearest port to Lhasa, just 1100 km away through Nathu La, many times less than any Chinese port on the Pacific coast. Nepal would play the role of transit corridor in such trade, which is an agreed matter between Chinese and Nepalese leaderships.

## IMPLICATIONS FOR INDIA AND CONCLUSION

Infrastructure development in the border regions of TAR by China presents India with numerous opportunities and challenges. The transport networks of road, rail and air in the Chinese master plan has the potential to change the very face of Tibet. At the same time, they also demand matching responses from the contiguous countries.

Going by the limited findings in this paper, it does not seem that China is looking at fighting a war with India in the near future. However, China is also mindful of such a possibility and seems to be intent on trying to retain leverage through very focussed and calibrated developments which are discussed below.

China's development of certain military capabilities and facilities has come as news. These are the "oxygenated" military training centres, border monitoring devices, the "Sky Soldiers" paratrooper unit and the highway-cum-airstrip construction capability.

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<sup>74</sup> \*Wang Zhen ed.; Tibet: A Textbook for Party Cadres; People's Publishing House; Sep 2010

<sup>75</sup>Policy

The implication of PLA having “oxygenated training centres” is a clear signal for the Indian military – the PLA is on track to resolve the problem of acclimatisation in TAR’s plateaus. Not only will PLA troops be in combat mode faster after regular training at such centres, these can also double up as acclimatisation facilities for large amounts of troops should there be any such eventuality. The India military accordingly should have suitable facilities to defend their interests at the trouble spots.

Similarly, the birth of the Chinese paratrooper unit named Sky Soldiers also amounts to non-conventional warfare keeping in consideration the aspects of climate, topography and methodology. The Indian military needs to evolve counter-tactics, equipment and training to meet such a rapid reaction capability of the PLA.

The border monitors might actually help in bringing down illegal cross-border movement, contraband traffic and ultimately scourges such as extremism and drug abuse. India might attempt at reaching an agreement with China on exchange of information on these lines. Another proposal is to explore whether licensed or joint production of these devices is possible in India for their eventual use across the troubled frontiers of the country.

As regards the expanding physical military infrastructure beyond the horizon in TAR, India needs to expend adequate resources for the continuous collection and analysis of intelligence through technical means like IMINT. Since these are capital intensive and privileged endeavours, academic efforts like this can only recommend that the Indian government takes a studied look at the matter and puts into place a lasting solution as part of the evolving National Security Strategy. Simultaneously, India has to go beyond the planned construction of 608 km of 27 border road links started in 2008 facing China. The development should not only be to match China’s facilities but also to win the hearts and minds of its own border populations through assured delivery of governance, goods and services.

Although there is comparatively less official Chinese information about their military build up and infrastructure development in TAR, the decision by Government of India to step up infrastructure and approve by far the largest escalation of military force itself indicates that there is credible information with the Indian government which has compelled it to embark on such an elaborate expenditure.

The information that many of TAR’s major economic routes as well as sections of its national highways are not metalled roads is indeed news since the media is flush with reports on the grandeur of Chinese roads on TAR.

However, since the Chinese themselves are targeting to black-top all their national highways and key economic routes within TAR during the 12<sup>th</sup> Five Year Plan, there leaves little doubt about the matter.

Similarly, specific recommendations by Liu Rui and Huang Xiaoming for upgrading TAR's border region roads, bridges, tunnels and highway airstrips to required standards of military manoeuvre also provide important indication on the Chinese thinking about any military adventure. If the recommendations are indeed valid, it follows that despite the oft incursions and assertiveness on LAC by Chinese troops, further escalation might not be in the minds of senior PLA or national leaderships of China.

The Qinghai-Tibet Railway's extension to Kathmandu and Nyingchi (Linzhi), would present India with another pair of challenge and opportunity. The challenge is that with the completion of Sichuan-Tibet Railway, military movement from the well stocked bases of Sichuan to Tibet would get a huge shot in the arm. India has to counter that challenge by upgrading its own transport facilities both by road and also by rail. As regards the opportunity provided by this railway, the next logical conclusion for India is to integrate it with the Indian railway network. Such a continental railway link has immense potential for transportation of goods and passengers between the Indian subcontinent and the Chinese landmass. But at the same time, politics would have to take precedence over economics since such a large scale link could have a deep impact on the regional politics, trade, economy and industry. India would have to take a call when it feels itself sufficiently leveraged to take that leap.

The future expansion of railways from TAR to Nepal and its possible integration with the Indian railway network provides a vision of transcontinental travel and freight from Chinese Siberia to India's Kanyakumari, from the shores of East and South China Seas to possibly the eastern shores of Atlantic. The further construction of a road network like the South Asia Overland Trade Corridor and airports would only facilitate seamless multi-modal transport unique in global reach. The possibilities of such an expanse are unprecedented in the history of this part of the world. While China seems to be proceeding with just strategic vision, it would make natural sense for all other countries including India to consolidate their economic positions before making such an integration. A range of treaties would have to be worked out between India and China so that benefits of such a transport network are equitable and people-centric. Else, these facilities and their consequences would come as fait accompli for India and would be quite unlikely to be of benefit to the Indian economy.

Development of the trade infrastructure in the forms of the South Asia Overland Trade Corridor and the "One Route, Two Centres, Three Export Hubs" also poses unprecedented opportunities and challenges for the India economy. If India can hammer out an agreement with China to develop core competencies in mutually exclusive sectors of manufacturing, then none can stop India and China from gaining long term advantage over the world market. However, if China wishes to do it alone, it would result in sharp trade imbalances and may ultimately end up in trade wars. Such an eventuality would not be in the interest of this region.

Of particular relevance is China's trade through Nepal. China accounts for more than 13.5% of Nepal's imports and 3% of exports and the gap is increasing as in the case with India-China trade. Much of that Chinese import is by sea which is slowly shifting towards overland trade with the developing infrastructure facilities. However, the major destination of these Chinese imports to Nepal is none but India. Nepal's role would be the trade transit corridor. Even at present Chinese imports to Nepal are making a deep impact on the Indian industry. Much of that import is reaching the Indian consumer. Reports suggest that the Chinese Customs Transit Declaration (CTD) consignments destined for Nepal are actually diverted to Indian cities for more efficient illegal trade. India needs to take this trend into notice especially because of the unimagined potential of the overland Chinese trade infrastructure connecting TAR with Nepal. Once that connection is fully through, there would basically be two trade transit corridors of Tibet and Nepal between the manufacturer and sellers in TAR's neighbouring Chinese provinces and that of India with the largest middle-income group market. Given the fact that India shares a very porous border with Nepal, consequent large inflows of Chinese goods through Nepal would pose a serious challenge to Indian customs for monitoring. The trade which will follow will supplant Indian manufacturing even further from the present alarming levels.

Therefore, the suggestion is to go for equal partnerships and investments on both sides of the border between India and China. For India, this paper suggests inviting Chinese enterprises to enter into public-private partnerships with Indian counterparts and set up industrial units in areas strategically suitable. Such industrial units can have a mix of products mostly export oriented and also of utility in the local markets. That may not only invigorate the local economies of these "remote" regions, but also make military adventurism foolhardy. Else alienating part of one's own territory for perceived threats shall hardly provide strategic solutions in which the people are also a stake-holder. Needless to say, there are a number of issues to take care of before taking such a step, foremost of which should a treaty with China on "mutual investments in border areas".

China is aware of the enormous tourism potential of TAR. Tourism is also a preferred sector because of its relatively faster cash inflows and minimum environmental footprint which is a sensitive issue for Tibet. However, in order to harness the potential of tourism, necessary infrastructure has to be put in place and China seems to be doing just that, not only in TAR but also through ODA to Nepal (e.g. the Lumbini and Pokhara projects). There are foreign and Chinese tourists travelling to TAR, Nepal and Bhutan on round trip visits. Thus, China is trying to develop the Himalayan belt as a premier tourist destination to the world and the enormous Chinese outgoing tourist market. India needs to plug into this route with destinations in Sikkim and North Bengal. That can be further tied with other tourist circuits in India.

As might have been noticed, most of the infrastructure development in the border areas have come about in the eastern sector, be it roads, railway, tourism etc. This also is an indicator that China is looking at plugging its economic potential into the vast South Asian market, especially that of India through the eastern corridor.

On the issue of harnessing Tibet's mighty rivers, the best option for India would be to remain on guard. Although a statement by a Chinese Vice-Minister rules out any plan to divert water from Tibet's south to China's North, there are riders attached like technical difficulty and objections by foreign countries. The language of the statement also fails to convince that such a plan has been discarded once and for all. This paper thus takes the line of the honourable Chief Minister of Assam Shri Tarun Gogoi and suggests that India should keep up with the regular monitoring of the rivers lest ignorance gets the better of us. Further, India should be well on board before any decision is taken on cross-territorial rivers preferably through multilateral mechanisms and one which India should convince China to adhere to as the standard protocol. Obviously India would have to engage in extensive multilateral diplomacy with other lower riparian countries for that.

As regards dealing with Tibetan secessionism, China would do well to try an inclusive approach. The question to ask is whether weaning away the Tibetans from the path of separatism is possible by *alienating* them? The new wave of protest by immolation by Tibetan monks and civilians and the Chinese helplessness to stop them serves another blunt reminder that if Socialism with Chinese Characteristics were to indeed succeed as an alternative model of development for the developing world, then China would do well to follow the essence of Mao's dictum of Seek Truth from Facts. And that fact is till today Tibet's politics continue to have a deep element of religion and shall remain so for the unforeseen future as it is in the

better part of the world. In order to truly address the political aspirations of Tibet, the Chinese would do well to assimilate religion with economics and politics to stop immolations and incarceration of their registered citizens and stop the exodus of thousands of Tibetans each year. Due representation of all stakeholders in events like the recently concluded Third Forum on the Development of Tibet in Athens, Greece followed up with sincere efforts to bring a lasting solution to Tibet must be made. Such an inclusive approach would be in the interest of China, Tibet, India, Nepal and the region at large so that trade can happen unhindered and prosperity is widespread.

What thus can be deduced from China's strategy and works on border infrastructure is that China is intent on maintaining leverage on the border situation vis-à-vis India. Whether militarily or in civil infrastructure, China is positioning itself to reap the maximum benefits from the development. The only spanner in the wheel is the will of the Tibetans inhabiting those areas and the question of their political identity. The March 2008 riots are an indicator that consumerist prosperity might not be the aspiration uppermost in the Tibetan psyche. Ergo, whether the Tibetan people would reconcile to the existing Chinese model of development or whether the Chinese can package a suitable and sustainable package acceptable to the Tibetans, that only time can tell.

It is also hoped that there are more regular and frank exchanges between Indian and Chinese counterparts along with diplomacy aimed at reducing misperceptions on both sides in order to avoid military build up along the borders. Any possibility of a military confrontation should be neutralised so that maximum national resources can be released for the development of the economy and peoples.