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Sounds of Sokshing: Revisiting the Contested Provisions of the Land Act 2007⁺

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The Issue

In July 2007, the former National Assembly passed the Land Act, which among other things provided for the deletion of records of *sokshing* (woodlots) and *tsamdro* (pastures) from private and community land registers called *lagthrams*. These *lagthrams* are the records of categories and sizes of landholdings owned by Bhutanese families or communities. Records of *sokshing* and *tsamdro* owned by peasants are also reflected in these *lagthrams*.

Why did the National Assembly decide to delete records of *tsamdro* and *sokshing* from the *lagthrams*? Its rationale was that *sokshing* and *tsamdro* lands belonged to the state although they were reflected in private *lagthrams*. In case of *sokshing*, it argued that *lagthram*-holders were only granted the 'right' to collect leaf litter for use as organic manure in agricultural fields. That is why it reasoned that peasants were not required to pay taxes for *sokshing*, whereas they pay taxes for other categories of their landholdings. They were also not allowed to cut down trees. The argument justifying the deletion of *sokshing* records from private *lagthrams* and transferring it to a state land register called *Chhazhag Thram* suggests that the state is now taking over what always

⁺ I would like to thank the Members of National Council and its Natural Resource and Environment Committee for kindly commenting on the arguments of this paper and for the suggestions they made while the issue of *sokshing* and *tsamdro* were discussed in two sessions of the National Council.

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belonged to it. The *Chhazhag Thram* would be maintained by the National Land Commission. It would have records of all the acreage of *sokshing* and their previous 'rights-holders'. Thereafter, the previous 'rights-holders' would be given priority to opt for leasing *sokshing* for not less than 30 years. The lease period can be extended. Besides, *sokshing* can also be inherited within the terms and conditions of the lease. But it cannot be sub-leased or transacted. Nor can permanent infrastructure be established on *sokshing* lands. Those individuals who agree to lease *sokshing* from the state must do so according to a management plan that has to be prepared among the lease-holder, Department of Forest and Department of Agriculture. The objective of preparing such a plan is to improve the vegetation and land of *sokshing*. Even with the management plan, the only purpose for leasing *sokshing* shall be for collecting leaf litter, not for cultivating the land or felling trees. In other words, the state would be giving previous 'rights-holders' the option to lease *sokshing* again for 'rights' to collect leaf-litter. The lease would be annulled if *sokshing* is sub-leased, not managed according to the plan, or if lease-holders no longer own agricultural lands.

The state's position on *sokshing* as articulated in the Land Act has, however, been contested by peasants and is not well-received in rural communities. In their perspective, *sokshing* is a category of land, which they 'own' and not a 'right' that the state granted them. That is why, they argue, that *sokshing* records are reflected in private *lagthrams* just as other categories of their landholdings and not in state's land register. They understand that the state's conservation policy did not allow them to cut down *sokshing* trees.

On the other hand, they have supported this policy by managing *sokshing*, planting and nurturing the growth of young saplings and protecting the trees since the time of their forefathers. They insist that it is due to such care and protection that there is well-protected *sokshing* in many communities. When the trees have grown and *sokshing* has matured, it is unthinkable for them that the state can decide to delete 'ownership' records from their private *lagthrams*.

Besides, the state has never justified why *sokshing* records are being deleted. Therefore, rural peasants aspire to have the *sokshing* rights reinstated in their *lagthrams*.

Nearly four years after the passage of Land Act, its provisions concerning *sokshing* 'rights' remain only partially implemented as rural people contest the state's position, and state agencies are constrained from fully implementing the law. Meanwhile, it has led to many problems in local communities (see below for details). The issue has been raised in the National Council, one of the two houses of Parliament, although any concrete outcome would have to await the amendment of the Land Act, which the National Assembly resolved to initiate in its seventh session in summer 2011.

This is a preliminary discussion paper that could help inform debates in Parliament and in the society. It will seek to elaborate issues concerning *sokshing* although some arguments would equally apply for *tsamdros* rights. It will highlight problems of enforcing the provision of the Land Act concerning *sokshing* and provide recommendations for possible consideration in addressing the issue.

Resolutions of the previous National Assembly on *sokshing*

It must not be assumed that the issue concerning *sokshing* and *tsamdros* is recent. The former National Assembly had discussed it several times. This section will briefly recall these discussions and resolutions in order to provide an understanding of the historical basis for this issue. Again, it needs to be mentioned that the National Assembly's discussions also took place on the *tsamdros* issue although the present focus is only on *sokshing*.

As I have mentioned above, one argument cited by the state to justify its ownership of *sokshing* is that peasants do not pay taxes for *sokshing*, whereas they do so for other categories of landholdings. An assumption underlying this argument is that peasants never paid taxes for *sokshing*. However, the decision not to levy taxes on *sokshing* was a

result of discussion in the 16th session of the National Assembly held on 9th July 1961. It was resolved that no taxes would be levied on ‘Sokshing and trees located in and around the vicinity in keeping with the government’s forest conservation policy.’¹ What this suggests is that taxes may have been levied before although this suggestion needs to be confirmed. If taxes were levied earlier, the suggestion that *sokshing* always belonged to the state would need to be re-examined. The idea that the state always owned *sokshing* may be a later development. The idea and practice of owning *sokshing* must definitely precede modern legislation.

Take, for example, the resolution of the 43rd session held in 1975. The National Assembly resolved then that the government would demarcate all government and public forest to develop forest resources. Recognizing that some private *sokshing* and *tsamdros* rights would fall within the demarcated areas, the National Assembly also resolved to allow the owners to collect leaf litter and retain *sokshing* ‘rights’ in their names. They could also fell trees if they obtain permits from the Department of Forests.² This resolution clearly implies that *sokshing* was not considered to be ‘government and public forest’ as the National Assembly was mindful of them falling within areas demarcated as ‘government and public forest.’ The idea that *sokshing* and *tsamdros* ‘rights’ are private is suggested in this resolution. Since collection of leaf-litter would continue and felling of trees would be regulated, the resolution also implies that leaf-litter collection and felling trees in *sokshing* were unregulated earlier since they were privately owned.

The felling of trees in *sokshing* was prohibited by a resolution of the 45th session held in 1976. “In view of the problem thus created, the 45th National Assembly session decided that as *sokshings* were mainly preserved for their leaves for manure,

¹ NAS 1, p.54.

² NAS 2, p.157.

felling of trees within *sokshing* would henceforth be prohibited.”³This provides room for re-thinking the contemporary argument that *sokshing* was always meant for leaf-litter collection and not for felling trees for wood fuel. As I will show below, the usage of *sokshing* for fuel wood collection is even prevalent today.

It appears that some peasants had started by then to convert *sokshing* into cultivable land. Why would they do that? A plausible explanation is that they sought to derive maximum value from *sokshing*-land since the felling of trees was prohibited by the National Assembly resolutions. The 46th session resolved to prohibit the conversion. “Though the people who had already done would be excused in future and all would have to abide by resolution No.3 of the 45th session of the National Assembly.”⁴

In the 52nd session held in 1980, some representatives proposed levying taxes on *sokshing* and *tsamdrol*. But the Land Act, which had been passed only the previous year (in 1979), did not require taxes to be paid. His Majesty King Jigmi Dorji Wangchuck had commanded that it was not desirable to amend the Land Act soon after its adoption. Hence the National Assembly resolved that taxes would not be levied. But the issue of taxation resurfaced during the 58th session in 1983. The representative of Trashigang Dzongkhag reported that there were two kinds of *sokshing*, ‘one for the purpose of manure and the other for firewood.’ He proposed that the *sokshing* be registered accordingly and taxed. Referring to the Land Act, the Director of Forests stated that *sokshing* are meant to be used only for manure, and that those *sokshing*, which are ‘not fit for the purpose of manure must be confiscated by the Royal Government even if it is registered in the *Thram*.’⁵

³ NAS 2, p.168.

⁴ NAS 2, pp. 173-174.

⁵ NAS 4, pp. 98-99.

An important question that arises is why did the people's representatives propose levying taxes on *sokshing* and *tsamdrol*? A plausible explanation is that paying taxes confirms private ownership of *sokshing* and *tsamdrol* just as peasants pay taxes for owning other categories of landholdings. Hence, it would have been a strategic move to re-gain ownership that translates not only to rights for leaf-litter collection but for felling trees and conversion to cultivable lands. It is also evident that there were two categories of *sokshing*, (one for leaf-litter collection and one for fuel wood-collection purposes) which modern law does not recognize. During one of my visits to Trashigang, I found out in some *gewogs* that people use *sokshing* not for leaf-litter collection but to meet fuel wood requirements.

These resolutions allow us to revisit the argument that the state always owned *sokshing*. If *sokshing* 'rights' were 'private' and if peasants paid taxes, collected leaf-litter, felled trees and converted to cultivable lands, it does not seem impossible that it was the peasants who 'owned' *sokshing* although modern legislation and conservation policies gradually brought *sokshing* under state ownership and regulation.

Provisions of the Land Act 2007

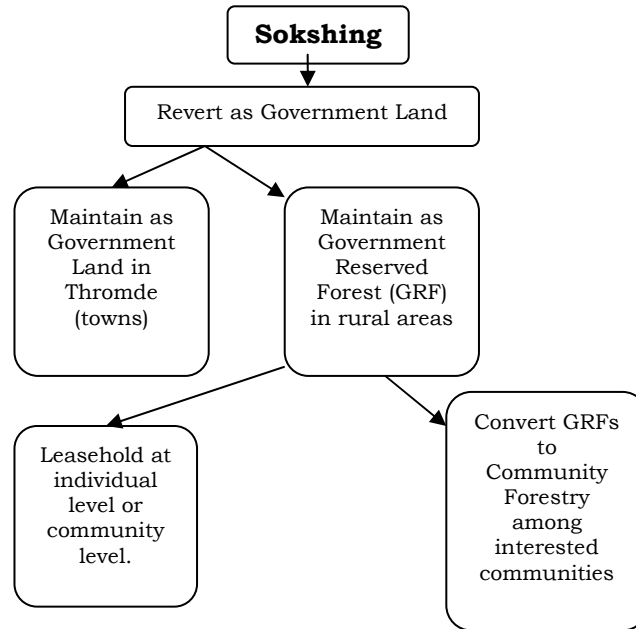
The provision to delete *sokshing* records from private *lagthrams* is stated in Chapter 11 of the Land Act 2007. This Chapter outlines how *sokshing* records will be retained by the state and how *sokshing* provided on lease would be managed hereafter. The following are the main provisions of Chapter 11.

All *sokshing* rights will be deleted from the *lagthrams*.⁶ *Sokshing* in towns (*thromde*) will revert as government land. In rural areas, *sokshing* will be maintained as government reserved forest land (GRF). However, *sokshing* reverted as GRF in rural areas can be converted to leasehold at the individual and community levels. In converting to leasehold, the previous right holders will be given preference.

But there are two important exceptions. One, those lands categorized as *sokshing* but do not have trees growing on them will not be given on lease. This means that even if a household has been cultivating the land reflected as *sokshing* in his/her previous *lagthram*, he/she can no longer cultivate it since it will revert as GRF. Two, a household that owned *sokshing* but does not own any agricultural land cannot hold it on lease. The justification for this appears to be related to the state's perception of the utility of *sokshing* as source of leaf litter for use as manure in the fields. Hence the argument that if a household has no agricultural lands, there is no need for leaf litter, and hence no need for *sokshing*.

⁶ It is important to mention that in the peasants' perception what is being deleted is not *sokshing* rights but *sokshing* ownership records.

The following flow chart shows what will happen after the deletion of *sokshing* records from *lagthram*.



Objective of deleting *sokshing* records

Why did the National Assembly decide to delete records of *sokshing* from *lagthrams* of the people? The Land Act does not answer this question. The rationale that circulates in the officialdom is that it is a strategy to redistribute *sokshing* to people who need them by taking over from those who do not need them. How that redistribution would be done is not explicit although it appears that the primary means is to lease out *sokshing* from 'rights-holders' who no longer own agricultural lands to those who own agricultural lands but do not have *sokshing* rights. Inherent in this assumption is also the concern that a handful of people own huge areas of *sokshing* compared to a large number of people who own far

less. It also assumes that *sokshing* endowment and unequal distribution is true for all dzongkhags and regions.

Statistical evidence from the National Land Commission does indicate a certain disparity in *sokshing* ownership but it is not as vast as those of *tsamdro*. The total area of *sokshing* in the country is 21234.1 acres owned by 16,141 *lagthram*-holders. The highest acreage of *sokshing* is recorded in Trashigang Dzongkhag with a total area of 3,523.28 acres constituting 16.59% of the country's total *sokshing*. The lowest acreage is recorded in Sarpang Dzongkhag with an acreage of only 0.15 acres. Table 1 shows that while 96.39% of the *lagthram*-holders own less than 5 acres of *sokshing* in the country, only 0.12% (20 people) own more than 100 acres. In other words, 0.12% of *lagthram*-holders own 17.79% of *sokshing* whereas 96% owns only 59.31%.

Table 1: *Sokshing ownership and distribution in the dzongkhag.*

Dzongkhag	Acres of sokshing				No. of lagthram-holders	Total area of Sokshing	% of Sokshing distribution
	0-5	5-50	50-100	Above 100			
Bumthang	318	31	0	3	352	1567.43	7.38
Chhukha	196	11	0	1	208	507.60	2.39
Dagana	227	4	1	1	233	425.03	2.00
Gasa	142	2	0	1	145	398.17	1.88
Haa	174	56	1	3	234	1585.72	7.47
Lhuntse	1217	81	1	0	1299	1870.56	8.81
Mongar	2701	22	1	0	2724	1752.26	8.25
Paro	105	127	0	0	232	378.76	1.78
Pema Gatshel	1474	4	1	0	1479	858.13	4.04
Punakha	592	29	3	1	625	1553.61	7.32
Samdrup Jongkhar	347	1	0	0	348	201.70	0.95
Samtse	6	0	0	0	6	8.31	0.04

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Dzong-khag	Acres of sokshing				No. of lagthram-holders	Total area of Sokshing	% of Sokshing distribution
	0-5	5-50	50-100	Above 100			
Sarpang	1	0	0	0	1	0.15	0.00
Thimphu	383	24	1	2	410	507.6	2.39
Trashigang	3297	59	3	0	3359	3523.28	16.59
Trongsa	475	14	0	1	490	962.51	4.53
Tsirang	394	2	0	0	396	233.54	1.10
Wangdue Phodrang	928	70	4	7	1009	3247.46	15.29
Tashi Yangtse	2308	8	0	0	1316	1448.96	6.82
Zhem-gang	273	2	0	0	275	203.32	0.96
Total	15558	547	16	20	16141	21234.1	100.00
Number of Thram holders	96.39%	3.39%	0.10%	0.12%	100%		

Table 2: Average sokshing ownership in the country

	Acres of sokshing	No. of Lagthram-holders	Acres of sokshing owned	Average Acres owned per person
	Above 100 acres	20 (0.12%)	3778.52 (17.79%)	188.9
	Between 0-5 acres	15558 (96.39%)	12594.36 (59.31 %)	0.809
	Between 5-100 acres	563 (3.48%)	4861.12 (22.90 %)	8.634
Total		16,141 (100%)	21,234.10 (100%)	1.315

What Table 2 shows is that 96.39% of *sokshing lagthram*-holders in the country own far less than the national average of 1.315 acres for every *lagthram*-holder. If redistribution of *sokshing* were to be done, it would have to be done largely

from those 20 *lagthram*-holders who own more than 100 acres, and partially from those who own between 5-100 acres. If this were so, Zhemgang, Tashi Yangtse, Tsirang, Samdrup Jongkhar, Dagana, Samtse, Sarpang and Gasa would not be affected much since most *lagthram*-holders in these *dzongkhags* own less than five acres. Bumthang, Chukha, Haa, Lhuntse, Mongar, Trashigang, Punakha, Thimphu, Trongsa and Wangdue Phodrang would see major redistribution. Paro would experience the most important redistribution since those *lagthram*-holders who own over five acres outnumber those who own less than that.

However, this could be tricky because a land category called *changra*, which is unique to Paro, must have been written off as *sokshing* in official records. On the other hand, *changra* is a traditional category of land, where people plant trees as a demarcation of land boundary or as protection against swelling rivers during the rainy season. Peasants had also paid taxes for *changra* like other categories of landholdings. The Land Act does not recognize this traditional land category of *changra*.⁷ If *changra* were separated from *sokshing*, then the number of *lagthram*-holders in Paro who own less than five acres of *sokshing* would increase.

If re-distribution were indeed the objective of deleting *sokshing* records from private *lagthrams*, there are difficulties as indicated both by the statistics given above and due to uneven regional endowment of *sokshing* resources. First, it is not realistic to suggest that *sokshing* in Trashigang be distributed to those in Sarpang, who do not own *sokshing*. Similarly, it is unrealistic to suggest that *sokshing* from Shongphu Gewog in Trashigang be distributed to those in Merak Gewog, which do not have any *sokshing*. Second, more than 96% of *lagthram*-owners own less *sokshing* than the national average of 1.315 acres. Redistribution would be

⁷ The idea and issue of *changra* was raised by Thuemi Ugyen Tshering, Hon'ble Member representing Paro Dzongkhag in the National Council.

feasible only if a large number of *lagthram*-owners owned far more *sokshing* than the national average. Therefore, re-distribution may be possible only from those twenty *lagthram*-holders who own over 100 acres. Since these twenty *lagthram*-holders constitute less than 1% of *sokshing*-owners in the country, it may not be a strong justification to delete *sokshing* records from more than 99% of other *lagthram*-holders who own less *sokshing* than the national average.

Problems relating to implementation of Land Act

Partial implementation

The fact that new *lagthrams* of peasants in dzongkhag, where the cadastral re-surveys have been completed would not include *sokshing* records, suggest that section 255 of the Land Act that provides for deleting these records is being implemented. On the other hand, these peasants have neither applied for nor been given the opportunity to apply for leasehold of *sokshing*. Hence, section 256 that provides for converting *sokshing* to leasehold has not been implemented. According to the Land Act, all *sokshing* in rural areas would now be considered as GRFs. They would no longer be regarded as *sokshing*. As GRFs, cutting down trees, converting to community forests (CFs) and other activities have caused frictions in local communities.

Nevertheless, peasants continue to collect leaf litter which is legally permissible only from *sokshing* that are given on lease. Again, people could then be legally construed as collecting leaf litter from GRF, and not from *sokshing*. What we see then is not only the partial implementation of the Land Act but the problems created by partial implementation.

***Sokshing* not provided on leasehold**

Even as *sokshing* records are being deleted, there has not been a simultaneous initiative by the concerned state agency to enable people to apply for leasehold. What could have happened is that the making of new *lagthrams* without *sokshing* records could have been accompanied by

distribution of application forms to apply for leaseholds. Since this has not happened, some peasants have assumed that the *sokshing* of their neighbours are legally converted to GRF by the provision of the Land Act. Therefore, they have made attempts to harvest trees from these *sokshing*-turned-GRF with or without permits from forestry officials. In some cases, forestry officials have allegedly marked trees in these *sokshing* for felling and extraction by contractors.

Yet again, this would be legally permissible because it would constitute an act of marking and harvesting timber from GRF and not from *sokshing*. The Department of Forest has, however, issued notification to withhold marking of trees in *sokshing* till further notice. Even without the leasehold though, peasants continue to perceive *sokshing* as *sokshing* and not GRF. Former owners continue to exercise their rights not only to collect leaf litter but also to protect the trees. In quite a few instances, peasants went on with indiscriminate felling of their own *sokshing*. They were concerned that soon there could be other claimants to the very trees they have nurtured and protected thus far.

Inadmissibility of legal cases

Previous owners of *sokshing* and *tsamdro* have sought legal course when other people cut down trees in their *sokshing* or brought cattle to graze in their *tsamdro*. These people view *sokshing* and *tsamdro* as government lands and not as private properties. When the owners approach the courts, they argue that they still enjoy the rights as provided for in the Land Act. The courts however, reason that *sokshing* and *tsamdro* are government lands according to the Land Act. Besides, the owners cannot produce any evidence of having taken *sokshing* and *tsamdro* on leasehold. Only if these owners produce evidence of leasehold would the courts be able to register cases for infringement or violation of leasehold by neighbours and other people. On the other hand, the likelihood of these people suing the previous owners for denying them access to government reserved forests is likely.

Thus, *sokshing* and *tsamdro* owners find themselves without access to means of redressing grievances. The government has deleted the records of *sokshing* and *tsamdro* from their *lagthrams* but has not made arrangements to give them on leasehold. Without leasehold, the courts do not admit their complaints and register legal cases when other people cut down trees in *sokshing* or graze cattle in their *tsamdro*.

Confusion between local people and state agencies

In one *gewog*, a health clinic was to be constructed as part of its tenth five-year plan activity in a location, where there is still *sokshing*. Since the local administration now legally deems *sokshing* as GRF, they wanted to start the construction of the clinic after the local forestry office gives permit to cut trees in the *sokshing*-turned-GRF. But the forestry official asked the *gewog* administration to first seek approval and clearance of the *sokshing* owner before trees were felled. Meanwhile, the *sokshing*-owner refused to give the approval and the construction of health clinic was delayed. This shows that the *gewog* administration is implementing the Land Act provision by considering the *sokshing* as GRF. But the *sokshing*-owner still holds on to his rights as he exercised before the passing of Land Act. On the other hand, the forestry office, which is the local state agency, was uncertain about the exact legal status of *sokshing*.

In another instance, a *gup* (elected community leader) had given permission to cut down *sokshing* in order to build a farm road. The alignment of the road passed through the *sokshing* owned by a peasant. The peasant's complaint to the *gup* was dismissed on the grounds that the Land Act 2007 does not recognize private ownership of *sokshing*. It did not concern that *gup* that had the state given this peasant the opportunity to apply for leasehold in the first instance as provided for in the Land Act, that peasant would still have priority of ownership as long as he had agricultural lands.

In some cases, dzongkhag officials have converted *sokshing* to community forestry (see below for details on community forestry). Community forests are carved out from GRFs. Since

sokshing are deemed to be GRF, dzongkhag officials have converted *sokshing* to CFs in quite a few instances. But in a few cases, these CFs were handed over to communities who would not have initially owned the *sokshing*. As a result, there are lots of inter-community grievances.

Prime Minister's Executive Order

On 4 March 2009, the Prime Minister issued an executive order instructing temporary suspension of *thram* transfers concerning *sokshing* and *tsamdros*. It stated that the decision to do so was taken in the 31st meeting of the cabinet. The suspension of *thram* transfers would continue till the Parliament approves the review of the Land Act. The order clearly mentioned that the Land Act would be submitted for review in the following session of the Parliament. Besides, it also instructed the Ministry of Agriculture and the National Land Commission to consult each other and consider alternative means to protect forest lands in accordance with the Land Act. This was because the people were cutting down mature trees that had grown on agricultural lands left uncultivated for a long time. Felling trees was widespread in preparation for the nation-wide cadastral survey.

The Prime Minister's order reflects the concern over *sokshing* and *tsamdros* issues, and the widespread felling of trees on private lands. But what the order did was momentarily suspend the implementation of the Land Act. Without implementation, peasants do not consider *sokshing* (and *tsamdros*) as GRF. The peasants' hope of having *sokshing* records reinstated in their *lagthram* has been reinforced by the executive order. Meanwhile, the anxiety on what could happen to *sokshing* issue has deepened since the Land Act was not tabled for review in either the third, fourth, fifth and sixth sessions of Parliament. The National Council discussed the issue related to *sokshing* and *tsamdros* in two of its sessions. It has passed a resolution in its third session highlighting the issue of *sokshing* and *tsamdros*, and called upon the government to initiate the review. The National Assembly decided in its sixth session to begin the amendment

of the Land Act in the seventh session this summer. It cannot be presumed at the moment that the *sokshing* records would be reinstated in private *lagthram*.

Transactions and inheritance issues

There are instances where people have sold and bought *sokshing* either by itself or along with land and houses. In the state's perspective, the buyer or seller would have bought or sold only the 'right' to collect leaf litter from that *sokshing*. On the other hand, both the buyer and seller in rural areas consider *sokshing*, as well as the land on which it grows, as part of the transaction. In their view, they did not engage in transaction of 'right to collect leaf litter'. It was the *sokshing* that was the primary object of transaction.

Sokshing were also inherited along with other agricultural lands. Until lately, the system of property inheritance was largely determined by customary practices. When parents bequeathed agricultural lands to their children, the size of landholdings given to each would often be determined based on the category of land as well as their fertility and productivity. Sometimes, those children who inherit landholdings that are comparatively less fertile would be given larger acreage of *sokshing* as compensation. This is logical because larger areas of *sokshing* suggest access to more leaf litter to be used as manure and thus enhance productivity of the less fertile land they have inherited.

The provision of Land Act to delete *sokshing* records may not have considered the complexity of customary property transaction, inheritance and distribution. It had isolated *sokshing* and treated it as if the norms of inheritance had no relation to it whatsoever. For example, it did not ask the question of why some families own *sokshing*, while others do not. Local communities consider *sokshing* as part of their landed property, not as rights. Deleting *sokshing* records, and having them reverted as GRF in some instance could have a bearing on the scale and nature of landed property distribution in local communities.

Converting *sokshing* to community forestry: the challenges

A major argument that has developed in relation to deletion of *sokshing* records and conversion to community forestry is that communities can harvest trees and meet their timber requirement from CFs, which is not possible from *sokshing*.⁸ Therefore, communities have been encouraged to surrender their *sokshing* so that it can eventually be converted to CFs. The Department of Forest considers it legally problematic to convert *sokshing* to community forestry since the Land Act states that *sokshing* will be leased out either to individual or communities.

However, those *sokshing* that were not taken on lease would be categorized as GRF. Once it is categorized as GRF, it is legally possible to convert to CFs. In other words, *sokshing* cannot be converted to CFs directly, but can be done indirectly once it is identified as GRF. This is a key problem in the context of present discussion. While *sokshing*-turned-GRFs can be given to communities as CFs, the communities have not been given the option to lease their *sokshing*. Without this option, all *sokshing* have been considered as GRF and in quite a few instances, many *sokshing* have already been given to some communities as CFs. But no CFs can be leased out to peasants as *sokshing* unless the government decides to remove it from the list of CFs that it

⁸ The Forest and Nature Conservation Act of Bhutan 1995 provided the legal basis for establishing community forestry which is defined as 'any area of Government Reserved Forest designated for management by a local community in accordance with the Rules issues under this Act.' The first CF was established in Dozam community under Drametse Gewog in Mongar. Today there are 200 CFs covering 24, 996 acres.

maintains. If a CF were removed from the list, the communities would be provided compensations.⁹

An important issue arises from a clause of the Land Rules 2007, which states that the authorities may lease any part of GRF land including reverted *tsamdro* and *sokshing* to juristic persons for sustainable operations including *private forest*. This means that *sokshing* taken over from peasants or communities and reverted as GRF may be leased to juristic persons such as corporations. This is an important issue that merits consideration.

Among many difference between *sokshing* and CFs, three stand out. One, *sokshing* can be legally taken on lease either at the individual or community level. But leasehold at community level will be far less than those at individual levels. *Sokshing* leasehold will therefore be predominantly at the individual level. CFs however, can only be at the community level. CFs are government forests given to communities. At the individual level, there can be private forests, which consist of trees grown on private agricultural lands that were left uncultivated.

Two, only leaf litter can be collected from *sokshing* whereas other forest products particularly timber can also be harvested from CFs. There is however, a ceiling called the Annual Allowable Cut, which is a restriction on the quantity of trees that can be harvested from CFs.

Three, access to *sokshing* resource, i.e. leaf litter, will only be to the lease-holder whereas *sokshing* converted to CF can be accessed by any member of CFs. For example, trees from a *sokshing* earlier owned by person A can now be harvested by person B or C, once it is converted to CF after obtaining the permits from the community's committee that manages the

⁹ Letter from Land Commission Secretariat (NLCS/PPD/(06)/09/318 dated 6th February 2009) changes incorporated in Land Rules and Regulation 2007 – Annexure 3

particular CF. Although CF management is determined by its own set of rules, there are many instances of difficulties faced when CFs are handed over to communities and the implementation begins. In relation to the present discussion on *sokshing*, some important observations merit consideration.

1. Some peasants still refuse to have their *sokshing* converted to CFs. If the Land Act were invoked, all *sokshing* not taken or given on lease would by now be categorized as GRF. The question of refusing to convert *sokshing* to CFs should not actually arise in the first place since it is the state and not the community, who legally owns GRF. If communities are interested in forming CFs, the state hands over some portion of GRF based on certain terms and plans. However, it must be pointed out that peasants have not yet been given the opportunity to apply for leasing the *sokshing* as provided for in the Land Act. So it cannot be assumed that they are not interested in leasing *sokshing*. It should be assumed that conversion of *sokshing* to GRFs was possible with voluntary support of the previous owners. Without being given the option to apply for leasehold, it may appear as if the owners have consented to convert their *sokshing* to GRFs. But consent was circumstantially forceful.

2. Despite their refusal to convert *sokshing* to CFs, some peasants still enrol as members of CFs. As long as there was a minimum of ten households, CFs could be established by allocating 2.5 hectares (5 acres) of GRF for every household.¹⁰ Refusal to surrender *sokshing* and yet enrolling as members of CFs are tactical moves. They hope to enjoy the benefits of CFs and also the traditional rights over *sokshing*. Quite often, *sokshing* are closer to village communities

¹⁰ This ceiling for the number of houses will reportedly be brought down soon from ten to three households. Similarly, the 2.5 hectares ceiling for GRFs allocated as CFs would also be lifted on a case by case basis. See “Community forests made more accessible” in *Bhutan Observer*, 9 April 2011.

whereas CFs can be further away. In the process of creating CFs, people have realized that CFs benefit them when they are closer to it. Thus, some peasants have either withdrawn or suggested withdrawal from CFs which are far away from their villages.

3. Once communities enroll as members of CFs, they are expected to meet their timber requirement from the CFs. The Territorial Division of the Ministry of Agriculture and Forests with its mandate of conservation does not give permits for timber harvest from GRFs to members of CFs. It must be mentioned that permits to harvest timber from CFs by members can be obtained from the CF's committee. On the other hand, non-CF members and other users, such as government institutions, must obtain permits from the Territorial Division to harvest timber from GRFs since they cannot harvest timber from CFs. They can also buy timber from CFs if the annual needs of the members are met. Problems would arise for non-CF members of the same community if CF members refuse to sell for various reasons. Access to other GRFs becomes a problem since those GRFs in and around village communities are converted to CFs. They have to meet timber requirement from GRFs much further away, which is expensive and difficult. Thus, there is a certain element of circumstantial compulsion for people to either become members of CFs or have their *sokshing* converted to CFs. This problem may be addressed if people are allowed to harvest timber from *sokshing* and yet reinstate the records in their *lagthram* (see section 5 below for justifications).

4. Many people have thus agreed to have their *sokshing* converted to CFs. Whereas only leaf litter can be collected from *sokshing*, timber can also be harvested from *sokshing*-turned-CFs except that all members are entitled to the same resources. The process of obtaining permits for marking and felling trees has also been drastically shortened. The basis for people's consent to convert *sokshing* to CFs however, is not that of the CFs' perceived benefits alone. It is due to the fact that the Land Act would anyway delete *sokshing* from their

lagthrams. Consent was thus a strategic bargain to obtain the best deal out of perceived loss of *sokshing* to the state's *Chhazhag Thram*. This consent would certainly be questionable if *sokshing* records were not to be deleted from people's *lagthrams*.

5. There is no doubt that the major benefit from CFs' to their members is access to timber, which is not possible from *sokshing*. Of course, the Forest and Nature Conservation Act of Bhutan 1995 (FNC Act) permits transfer of ownership of forest produce that includes boulders, stone, sand, gravel, rocks, peat and surface soil in CFs to the people. However, the Forest Rules 2006 (section 36.7) as well as the Land Act state that such resources found in any registered lands shall belong to the state. Article 1.12 of the Constitution has also given the state the rights over mineral resources, rivers, lakes and forests. The state would regulate the use of these resources by law. There are conflicts between provisions of the FNC Act and Land Act. The Constitution however, supports the provision of the Land Act. Thus, CF members' major benefit is really the access to timber. But the primary purpose of disallowing timber harvest from *sokshing* was to protect and conserve forests. This objective is compromised as timber can now be harvested from *sokshing* converted to GRFs and CFs. What the Land Act then does is transfer the registration of *sokshing* from private *lagthrams* to the state's *Chhazhag Thram*. Cutting down trees from *sokshing* was not permissible when it was registered in private *lagthrams*. However, it is possible when it is registered in the state's *Chhazhag Thram*. If the harvesting of timber is to be permitted from the same woodlot (i.e. the *sokshing*) under different names and categories such as CFs and GRFs, transferring of *sokshing* records also may not be necessary since the state claims to own *sokshing* like any other GRF. One possibility then is to reinstate *sokshing* records in private *lagthram* and allow timber harvest besides leaf-litter collection under similar plans of CFs' sustainable management. This will have the positive effect of being an incentive to people to protect and manage *sokshing* with a sense of ownership.

Meanwhile, the objective of conservation and sustainable resource use, which is inbuilt in GRFs and CFs, will also be met.

6. A major argument and criticism against this suggestion is that those people who do not own *sokshing* will not be benefited. Instead, they may end up paying for timber and also leaf-litter from those who own *sokshing*. The cost of timber and leaf litter would depend on the owner of *sokshing*. This argument would hold true if the state insists that *sokshing* would be the only source of meeting rural timber requirements. However, timber requirements are being met from GRFs and CFs. On the other hand, it is important to note that most CFs are not necessarily created from existing *sokshing*. Rather, they are also largely carved out from GRFs. This implies that the state is willing to hand over government land and forest to communities. Following the same logic then, the government can provide GRFs to those people who do not have *sokshing*. Those GRFs could then be maintained as *sokshing*. In other words, rather than converting *sokshing* to GRFs, GRFs may be converted to *sokshing* and given to those who do not have *sokshing*.

Recommendations

In order to address serious concerns of rural peasants pertaining to the deletion of *sokshing* records from private *lagthrams*, the following recommendations are being proposed in the context of above discussions. Some of these recommendations may be visited while reviewing the Land Act 2007, while others would be the prerogative of His Majesty the King.

1. In relation to issues of *sokshing*, the Land Act review could consider if *sokshing* rights and records could be reinstated in peasants' *lagthrams*.
2. If reinstatement of *sokshing* records is found to be justifiable, Parliament could fix a ceiling for the maximum acreage of *sokshing* a *lagthram*-holder can have registered in his/her *lagthram*. The ceiling must consider the size of the

person's agricultural landholdings so that he/she can collect enough leaf-litter and also meet minimal timber requirements if *sokshings* are to be converted to private forest (see section 6 below).

3. The state may take over those *sokshing* whose acreage exceed the ceiling as well as those *sokshing* whose owners do not have agricultural lands. They could be redistributed to those landholders who either do not own any *sokshing* or own very little *sokshing*. However, *sokshing* may not be provided to those landholders who have left their lands fallow and uncultivated for a long time. Those *lagthram*-holders in the community who have less *sokshing* may be permitted to collect leaf litter from these *sokshing* belonging to peasants who no longer cultivate their fields. On the other hand, *sokshing* could be provided to those landholders if they resume cultivation of fallow lands.

4. In those communities where there is not enough *sokshing* for redistribution, the state may identify certain areas from nearby GRFs and provide them as *sokshing* to needy peasants. The land records of those GRFs would then need to be transferred in the people's *lagthram* as *sokshing* instead of GRFs. If the understanding is that the state would still own the land and trees, transfer of GRFs to private *lagthrams* can be legally done by Parliament. However, if the understanding is that the people would own even the *sokshing* land and trees, it would be His Majesty's prerogative to grant GRFs as *kidu sokshing*.

5. The Land Act states that those *sokshing* lands which have been cultivated since there are no trees growing on it shall not be leased. This means that even if the land has been under cultivation, it will revert as GRF. Technically, these will be forests without trees. But it would be illogical to call a *sokshing* bereft of trees as forests (GRF). Again it is His Majesty's prerogative to grant such cultivated land as *kidu*.

6. Many peasants hope that the state will enable them to convert *sokshing* to private forests (*gerde nagtshel*). The government has allowed people to retain uncultivated

agricultural lands overgrown with trees as private forests. The lands belong to the people. However, the state considers *sokshing* lands as state lands. Thus, converting *sokshing* to private forests would involve privatizing state land since private forests can only be on private lands, not on government lands. In this case, the prerogative to grant *sokshing* land to peasants for conversion to private forests will be that of His Majesty the King.

7. If the law (by way of amending the Land Act) makes it permissible for *sokshing* to be converted to private forestry, it will be possible to harvest timber from these *sokshing*. The state is not averse to permitting felling of trees from *sokshing*, if they are reverted as GRFs. Those peasants who do not own *sokshing* could meet their timber requirement from CFs. The amendment could also consider permitting only leaf litter collection from *sokshing*, even if the records are reinstated in their *lagthram*. This would mean that communities would have to meet their timber and other forest produce requirement from CFs and GRFs. However, every community member must be a member of CF to ensure equitable access to forest resource. Thus the CF rules that require a minimum of ten households to establish a CF may need to be amended. Every community irrespective of the number of households must be permitted to establish a CF.

Both these suggestions have equitable benefits. In one way or other, both ensure access to leaf litter as well as timber requirements and yet address conservation concerns. If timber harvesting is permitted from *sokshing*, trees in GRFs need not be harvested. Otherwise, timber has to be harvested from GRF.

8. Review of the Land Act may consider other issues besides *sokshing*. For example, the legal requirement of a minimum plot size of ten decimals has created lots of difficulties in the process of *lagthram* transfers. The review of the Economic Development Plan and Foreign Direct Investment policy 2010 has also pointed out the need to review the Land Act. Equally

pertinent to the issue of *sokshing* is that of *tsamdro* for highland communities depending on livestock.

Conclusion

The concern generated by deletion of *sokshing* records from peasants' *lagthram* is an important issue. Reinstating these records and considering the above recommendations could achieve the same objective that was initially intended by deleting *sokshing* records from private *lagthrams*.

Since leaf litter collection is an important source of organic manure, it makes sense to encourage it in the light of government's policy to promote organic agriculture. This is even more relevant when smaller sizes of good breeds of livestock are promoted in place of traditional breeds. This will mean diminished supply of livestock droppings. So people will have to apply alternative organic manure like leaf litter.

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The Use of Qualitative and Ethnographic Research to Enhance the Measurement and Operationalisation of Gross National Happiness

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Abstract

This paper aims to introduce ethnographic and qualitative research as a valuable addition to previous quantitative surveys in order to measure, test and operationalise Gross National Happiness in the Kingdom of Bhutan. Ethnographic research and anthropological theory can reveal valuable insights into everyday practices and experiences of and with GNH and GNH-related policies on the ground level. In today's world, GNH, and other happiness and well-being surveys have become a global phenomenon, with Bhutan leading the field. However, no reliable method has been devised to test and advance this project. The essay argues that qualitative research can be of exceptional value for Bhutan's policy makers and international researchers, because it goes beyond quantifiable means in order to gain insight into the causes and effects of GNH-led policies.

Keywords: ethnography; qualitative research; Gross National Happiness

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Introduction

In the early 1970s, the Kingdom of Bhutan entered the world-stage with a new approach to development and modernisation. Conscious of the difficulties that other Himalayan nations (such as e.g. Nepal) have experienced during processes of rapid modernisation¹, Bhutanese policy-makers adopted a unique strategy that aims to preserve Bhutan's spiritual and cultural values whilst bringing about economic and technological development. This strategy is underpinned by the concept of 'Gross National Happiness' (GNH). It emanates from the idea that society's happiness, quality of life and 'social progress' can be measured in more holistic terms than more standard economic indicators such as Gross Domestic/National Product (GDP/GNP). GNH has become a 'key indicator' that assesses the society's levels of social and psychological wellbeing. It is assumed that this project will lead to economic, environmental and, more importantly, cultural sustainability. GNH "*resides in the belief that the key to happiness is to be found, once basic material needs have been met, in the satisfaction of non-material needs and in emotional and spiritual growth*" (Bhutan 2020 (1999) cited in Denman et al, 2008: 479).

This view is intimately connected with traditional Buddhist ethics and Buddhist perceptions of economy. To quote Ardussi (2005)

It was the declared obligation of the civil head of state to maintain law and order so that its subjects could devote themselves to leading a moral life and strive for a better rebirth in the next (cited in Bates, 2009: 2).

Bhutan's leading role in the world

In light of current developments in the Western, capitalist world - most notably, the global economic 'meltdown' in 2008 - Bhutan's unique project "*captured the imagination of the*

¹ e.g. increased migration from rural to urban spaces and threats to traditional cultural values (Mitchell, 1976)

larger world" (Thinley, cited in Larmer, 2008:4). Even before, many scholars concerned with ethics in economy called upon Western policy-makers to rethink their priorities, in order to "*facilitate a wiser and more compassionate appreciation of our place and purpose in the world*" (McDonald, 2003: 2-3). Today, more and more economists and Western scholars realise that measuring income and economic advances alone cannot tell us anything about what makes life 'good' or 'less good' (Mathews et al, 2010: 3).

In the beginning of the 21st century, most nations throughout the world find themselves dissatisfied with standard economic indicators (such as GDP or GNP) and consumer capitalism. Since autumn 2008, a new trend emerged in public discourse: is there no other way than quantifiable means to assess the successes and failures of economy and governance? Has money and the need for more and more monetary profit led to an unsustainable system, which in the end is bound to collapse? Is the correlation between money and happiness as simple as Western economists make it look?

Most recently - in November 2010 - the British Prime Minister David Cameron announced the formation of a £2m *National Wellbeing Project*, in order to identify key areas raising the population's wellbeing. Similar to Bhutanese policy makers, Cameron argues that standard economic measures such as GDP "*do not give the full picture*" (BBC News, 2010). He is following in the footsteps of former US senator R. Kennedy (1968), who famously said that "*GDP measures everything except that which makes life worthwhile*" (cited in BBC News 2010). Other nations such as France or Japan attempt to include human wellbeing in their assessments of policies, but by far not to the extend of Bhutan's unique project.

Bhutan has the advantage of being involved with GNH since the early 1970s, when the 4th dragon king of Bhutan famously stated:

Gross National Happiness is more important than Gross National Product" (Jigme Singye Wangchuck (1972), cited in Bates, 2009: 1).

Since then, Bhutan has become the leading nation in the development and application of this alternative governmental strategy, and much can be learned from Bhutan's journey towards a more humanistic approach to economy, development and governance.

In addition, GNH is closely connected to sustainable development, which is defined as “meeting the needs of the present without compromising the ability of future generations to meet their own needs” (World Bank Report 2003, cited in Ezechieli, 2003: 15). Sustainable development has a holistic ‘triple-bottom-line’ whereby a balance between economic growth, socio-cultural equity, cultural preservation as well as environmental management and protection is emphasised (Ezechieli, 2003: 15). Wangchuck (2006) stresses that Bhutan's dedication to sustainable development is closely entwined with Buddhist principles of respect and balance between human beings and their natural habitat (ibid: 68-9).

Today, most empirical evidence suggests that the human impact on nature is more severe than previously assumed, and may lead to widespread devastation of the planet's ecological environment. Again, Bhutan is playing a leading role in the protection of natural resources: since 1995, 26 percent of the total land area in Bhutan has been designated as national protected areas, making Bhutan one of the most important biodiversity hotspots on the globe (Conservation International, 2007; Wangchuck, 2006: 68). Moreover, Bhutan's commitment to environmental protection is manifest in national laws: for example making industrial and commercial activities (such as e.g. copper mining) illegal if they threaten the natural environment. Another policy, which ensures that Bhutan's forest areas never drop below 60 percent, puts Bhutan on top of the list of the least deforested nations in the world (Wangchuck, 2006: 19). Environmental preservation is one of the most important pillars of GNH, signifying the Bhutanese understanding of the close relationship between human wellbeing and the natural environment. Again, this insight is of particular importance in

the 21st century, making Bhutan an exemplary nation, from which other governments can learn.

These examples are just a brief illustration of Bhutan's leading role in the development of a new approach to society, state and the world as a whole. The unique project of GNH can provide important understanding and evidence of the interconnectedness of human happiness and life-as-a-whole, which is of uttermost relevance for the entire world in the 21st century. Yet, the Western world is 'hungry' for numbers and quantifiable means, through which the *Four Pillars of GNH* can be measured, tested and illustrated. The issue of *how* to measure and operationalise GNH is yet to be resolved, and it is to this end that I argue that qualitative and ethnographic data can provide a unique insight into the workings of GNH on the ground-level, and therefore enhance quantitative illustrations.

Measuring and Operationalising GNH

GNH is a rather 'new' concept (in comparison to e.g. capitalism or feudalism), that has a vast appeal to other nations. Similar to Bhutan, for example, Great Britain is attempting to measure potential indicators of happiness and wellbeing, including education, environment, inequality and healthcare. However, very much like Bhutan itself, statisticians at the UK's *National Wellbeing Project* face difficulties in deciding *what* exactly should be measured, or *what* kinds of questions should be asked. National statistician J. Matheson told the BBC that devising a reliant survey must go "*beyond happiness*" and that the measure must be "*sustainable over time*" (BBC News, 2010). No decision has been reached at this point, of how exactly this survey should be devised and operationalised. The UK Office for National Statistics is currently undergoing a nation-wide, public survey, giving citizens, organisations and businesses the opportunity to make their voices and views on this project heard (ONS, 2010/2011). In a diverse, multi-cultural society as the UK, finding a common denominator by which to assess

and test well-being becomes a huge task, and there is surely a long road ahead for British policy makers.

It would appear obvious that Bhutan's model of GNH would require some kind of reliable, testable, numerical measurement of happiness. McDonald (2003) emphasises the "*operationalisation of measures capable of accurately monitoring developments*" as the primary task of Bhutanese policy makers (ibid: 18). The *Journal of Bhutan Studies* as well as publications available through the *Gross National Happiness Commission* suggest various means to operationalise GNH and measure its success and failures. For example, Donnelly² (2005) suggests that as happiness is defined as the "*sum of satisfaction*" of various "*life domains*" (such as e.g. health, family and community, personal and spiritual development, etc.), happiness can be "*predicted from cognitive measures of domain satisfaction*" (ibid: 349). She concludes that each life-domain satisfaction can be measured through self-report surveys, which then allow policy-makers to invest more effort in domains where satisfaction is reported to be low (ibid: 349-50, 366).

Ruut Veenhoven (2005) - founding father of *Happiness Studies* and the *World Database of Happiness* - defines happiness as the "*degree to which a person enjoys his/her life-as-a-whole*" (ibid: 287). He argues that this form of happiness is universal, and can be measured using 'self-reports' in "*general population surveys*" (ibid: 287) - that is, surveys, in which people assess how much they enjoy their 'life-as-a-whole', by means of scales ranging from 1 (Dissatisfied) to 10 (Satisfied)³. As GNH relies on quantifiable data in order to

² It is important to note, that Suellen Donnelly centres her argument around Positive Psychology, which is concerned with the study of positive traits. As she argues, it is a new trend in Western psychology "*away from analysing the past, towards working on an improved future*" (Donnelly, 2005: 347).

³ This form of 'direct measurement', relies on self-report questionnaires, which researchers design with the help of several standardized rating scales (as developed by e.g. Thurstone,

measure its success, a mean has to be found. Veenhoven suggests that the subjective answers of *life-satisfaction surveys* should be combined with statistical data about life-expectancy, leading to an estimate of '*happy life years*', indicating how happy and long people live in a country (ibid: 288). GNH is, in this context, a quantifiable mean, resulting from "*descriptive statistics of general tendency*" (ibid: 301). The obtained data can then be compared over time (measuring the success of e.g. GNH-related policies) and even across countries (e.g. in the World Happiness Database) (ibid: 304).

I argue that while these means to measure GNH are important, they could be enhanced by qualitative and ethnographic data. Ethnography is the main research method of Social and Cultural Anthropology - the 'study of human culture', and is defined by Taylor (1871) as "*that complex whole which includes knowledge, belief, art, morals, law, custom, and any other capabilities and habits acquired by man as a member of society*" (cited in Pelissier, 1991: 77). As such, anthropology is concerned with the study of the physical and socio-cultural development of human beings and their behaviours within a socio-cultural context. By means of ethnographic research, that is, participant observation and other qualitative research methods, anthropologists aim to identify how socio-cultural beings think and how their Weltanschauung is reflected in modes of thought (Pelissier,

Guttman or Likert). Usually, these surveys contain questions concerning attitudes or beliefs about a certain topic (in this case: life satisfaction). The advantage of these scales are that they are simple and easy to conduct, as well as allowing researchers to repeat and compare their data. However, these scales are said to be too one dimensional and unreliable (Trochim, 2006; Pennington, 1999: 78 - 84). Veenhoven (2005) proposed self-report surveys, with common questions such as "*Taking all together, how satisfied or dissatisfied are you currently with your life as a whole?*" (ibid: 297). Respondents answer by choosing a number from 1 (Dissatisfied) to 10 (Satisfied) (ibid: 297).

1991: 76). The central aim of ethnography is to understand people's actions and their experiences and perceptions of the world from an *emic* perspective, and how these individual idiosyncrasies motivate actions and vice versa (Brewer, 2000: 11).

This anthropological endeavour is similar to the method of measuring GNH, in order to understand the significance and everyday manifestation of GNH-policies on the ground level. It is here, where qualitative, ethnographic research can provide important clues about GNH-led policies. While quantitative surveys (as mentioned above) can tell us much about *how* common and wide-spread a phenomenon or sentiment is (Alasuutari, 1995: 22), qualitative, ethnographic research can shed light on the *'why'* of said phenomenon's commonality. That is to say, rather than only measuring *how many* people identify e.g. economic security as a source of happiness (such as in e.g. Zangmo, 2008: 3), ethnographic research is able to provide insight into *why* respondents identified economic security as the most important factor of happiness. Of course, *how* and *why* are not mutually exclusive concepts that can be investigated in isolation, but they are closely entwined. Thus, Bhutan's policy makers would benefit from using ethnographic research to enhance and complement quantitative statistics.

In his tribute to Gross National Happiness, T.S. Powdyel (1988) states that "*His Majesty the King [of Bhutan] has dreamt for us a Bhutan where our success will not necessarily be measured by economics or statistics, but by the level of happiness and contentment that the Bhutanese are able to enjoy*" (ibid: 60; own emphasis). I believe that if this statement lies at the heart of GNH, the purely quantitative measurement of happiness and its statistical representation appears to be almost contradictory to GNH's vision and aim. Bhutan's unique project rejects common denominators such as GDP and GNP - which are numerical facts about quantifiable means (e.g. cash-flow, import and export numbers, etc.). At the same time, attempts are made to measure the citizens' happiness through the quantification

rejected in the first place. It is here where Bhutanese policy-makers concerned with operationalising GNH can benefit from qualitative, anthropological research. Rather than reducing happiness to statistics, much can be gained from incorporating qualitative research methods (such as Dorji and Kinga's (2005) narrative approach - see below) in assessing GNH in Bhutan.

Ethnographic research in a nutshell

Social sciences are commonly concerned with the study of human beings, their behaviours, actions and sentiments. Of course, these sciences can never be as 'objective' as empirical, natural sciences, such as physics, medicine or chemistry. However, the difference between social and natural sciences arises due to the *foci* of studies: universal physical laws or chemical compositions do not change (as quickly), while society, culture and human beings are in constant flux and transformation. Natural sciences base on *Positivism*, which assumes that the world is external and independent of human actions. Gravity, for example, is a natural law autonomous of human beings, which can be empirically and accurately calculated and measured⁴. Social sciences, on the other hand, deal with human beings, which are in constant movement and change (Baker, 2006; Brewer, 2000). Ethnography and many branches of social sciences are based on *Naturalism*, which is the assumption that "*the social world is not reducible to what can be externally observed, but is something created and recreated, perceived and interpreted by people themselves*" (Brewer, 2000: 34, own emphasis).

The Encyclopaedia of Social Sciences defines ethnography as the "*study of people and their culture in their natural habitat*"

⁴ Although, postmodern critique (since the 1950s) of empirical research and natural sciences argues that there is no knowledge that is objective and truthful. In particular, philosophers such as Kuhn, Feyerabend, Boudrillard or Foucault deny the existence of all universal truth statements, even if they are based on mathematical and empirical evidence (Brewer, 2000: 24).

(cited in Robben et al, 2007: 7), including their behaviour, rituals, symbols, beliefs, values and emotions, in order to understand the people and their culture from an *inside* point of view. Ethnography is mainly based on the research method called *participant observation*: the researcher immerses him-/herself in the field for a long-term study (mostly 12-24 months), learns the native language and manners, and participates in everyday-life activities, while at the same time observing people, behaviour, events and everyday activities. The methods used to gather data are flexible, unstructured and open-ended (Burgess (1982) cited in Brewer, 2000: 18). Often, ethnographic research is described as *bricolage*, using different strategies and research methods to gather data (Alasuutari, 1995: 2). For example, besides participant observation, anthropologists make use of interviews, document analysis and focus groups, as well as questionnaires⁵ and essays.

The four imperatives of ethnographic research are: (a) what should be studied are the meanings people *themselves* give to the social world; (b) research-respondents should be allowed to give answers in their *own* terms, that is, their own native language and in their own words; (c) research has to go in *depth*, because native meanings are often taken for granted and thus, remain subconscious even to natives themselves; and (d) research and data has to be analysed and interpreted in the social *context* in which these meanings emerge (Brewer, 2000: 163-4). What distinguishes this form of research from e.g. quantitative surveys and questionnaires, is that

⁵ While other social sciences use questionnaires based on 'closed' questions, allowing the respondent only to choose from pre-determined answers (e.g. Dorji's (2005) *Questionnaire for the study of youth in Bhutan* (part of the *National Youth Survey*)), anthropologists often use questionnaires with 'open' or 'free' responses. This qualitative approach offers a unique insight into the respondents' sentiments and experiences that cannot be obtained by using limited choices of answers only (Brewer, 2000: 63; Mathews et al, 2010: 7)

anthropologists take into account both verbal *and* non-verbal behaviour (Alasuutari, 1995: 16), and present data from an *emic* - that is, and insider's or native's - perspective, which acknowledges that often each individual of a group has different perceptions and experiences of the same action or event (Fetterman, 2010: 20-1). Culture is, as Rabinow (1977) suggests a “*heterogeneous web of meaning spun by the people themselves*” (cited in Robben et al, 2007: 443). In this regards, anthropology has the advantage of recording these multiple perspectives of realities, which are all crucial to understand why people think, feel and act the way they do (Fetterman, 2010: 21).

Very good examples of the various voices of people under study and how qualitative data can complement quantitative surveys are Dorji's (2005) monograph *Voices of Bhutanese Youth*, as well as Dorji and Kinga's (2005) *Youth in Bhutan: Education, Employment and Development*. Dorji's (2005) narrative and case-study approach (ibid: 1-142) vis-à-vis a quantitative survey (National Youth Survey, ibid: 143-171) provide a detailed insight into the individual lives and struggles of Bhutanese youth. As Dorji (cited in Dorji and Kinga, 2005) states in an introductory note:

Youth development should entail the views of young people who can offer a perspective that is unique to them. What they express about their experiences, challenges, expectations and outcomes can bear so much on the policies and programs pertaining to them (ibid: 4).

For example, Bhutanese policy makers asked themselves why universal enrolment has not been achieved yet, and why so many students drop-out of education, albeit provision of free education and schooling infrastructure. Dorji and Kinga (2005) identified that besides state subvention, many rural parents, who depend on agriculture for basic income, cannot afford the costs of school uniforms, travel to schools or boarding fees (ibid: 8). Moreover, children are needed at home, to provide farm- or other labour, in order to contribute to a family's financial stability (ibid: 11).

Yet, Dorji's (2005) narratives also provide an unexpected clue to understanding non-enrolment and drop-out rates: the

analysis of case studies demonstrated that although 33 percent of students dropped out of school for financial reasons, 31 percent of respondents stated that they had to give up school because they come from a 'broken family' - that is, parents are divorced or dead, or children suffered from parental alcoholism or abuse (ibid: 146-8). Whilst reading the accounts of Bhutanese teenagers as presented in Dorji's work, Bhutanese policy makers are allowed a glimpse into the psychological strains and emotional hardship of some youngsters, which otherwise may have remained hidden. Although the quantitative survey may provide us with numbers and 'hard' data of drop-out rates, these narratives provide a unique insight into what really concerns the Bhutanese youth. Dorji argues that

Organisations and programs can be more cost-effective and responsive by ensuring that the problems of young people are heard, recognized and acknowledged with the appropriate actions," and more importantly: "the purpose of this [survey] is not to portray youth as helpless victims of circumstances, [...] but to identify problems based on their views and stories (Dorji and Kinga, 2005: 4; own emphasis).

It is exactly this emic perspective of life, that anthropological research tries to reveal. By using case-studies and narratives, rather than numbers or arbitrary interpretations, anthropological data often simply presents 'how things are from an insider's perspective'. Similar to Dorji and Kinga's work, anthropological data often comes in form of narrative extracts of natural language (Brewer, 2000: 163), whilst at the same time considering socio-cultural life as all-encompassing and multi-layered. This principle is similar to Buddhist philosophies, which I will demonstrate below.

Ethnography and Buddhism

Mahayana Buddhism is deeply embedded in all aspects of Bhutanese society and thus, in GNH. The basic doctrine of Mahayana Buddhism is *sunyata* – the interdependence of all things in the cosmos. According to this principle, nothing exists independently from each other, but everything influences and depends on each other: as Alan Watts states, all elements (matter & mind) of life are interconnected to

make “a universal symphony of harmonious totality” (cited in Suzuki, 1963: xx).

The Buddhist principle of interdependency also forms a major part of ethnography. Through immersing him-/herself into a community, the fieldworker aims to gain a holistic perspective of human beings and their interrelationships with all aspects of human life (Robben et al, 2007: 4). Holism and contextualisation are guiding principles in ethnographic research, making qualitative data immensely complex, rich and multi-dimensional - just “like life itself” (Alasuutari, 1995: 43). Analysis of data includes consideration of all “multilayered and interrelated contexts” (Fetterman, 2010: 11), such as a community’s religion, history, environment and economy. As in Buddhism, anthropologists assume that all elements of society and culture are interrelated and interdependent, and cannot be analysed in the absence of relevant elements. In contrast to quantitative surveys, which use mere samples of a population in isolation of socio-cultural contexts, and which can be conducted in a very short period of time, quantitative research is characterised by a vast complexity, which requires from the anthropologist to remain in the field for a prolonged period of time (12-24 months) in order to “gather many kinds of data that create a picture of the social whole” (Fetterman, 2010: 19).

These research principles would be suitable for the Bhutanese researchers' own Buddhist views, with particular consideration to *sunyata*. More importantly, as GNH is based on an all-encompassing principle of interconnectedness, anthropological research, with its emphasis on holism, would prove itself as the most fitting research method to operationalise and measure its policies and effects.

Another principle of Buddhism is *impermanence*, which emphasises that reality is transient and in constant flux

(Tideman, 2009: 1). Similarities can be found in the *Heraclitean*⁶ view of anthropology. As Fernandez (1994) states:

We anthropologists have long had the Heraclitean understanding that we cannot step into the same stream twice. (cited in Wolcott, 1995: 167).

Ethnographic research acknowledges that some aspects of socio-cultural life are in constant flux and change over time. Although the core of a culture remains consistent, people may accommodate it differently over generations, time and space. Thus, we assume that the ethnographies we produce are not ever-valid accounts of reality, but that any social science research (including quantitative surveys) only captures a community and their perceptions in a particular moment in time (and, of course, in a particular context). Thus, critique emerged that ethnographic research (or other social sciences for that matter) is limited, because it cannot be repeated (in the same society, at a different time). Again, the difference between empirical, natural sciences and social sciences are evident: natural sciences can achieve validity and reliability of data by repeating an e.g. experiment over and over again, and obtain the same results. On the other hand, social sciences deal with a different subject: human beings and their perceptions and experiences in life. Both humans and their life are in flux and people's perception and experiences of reality are ever-changing and fluid.

The acknowledgment that anthropological research provides a snapshot of a particular community over a specific period of time is, however, not a short-coming but an advantage in the Bhutanese context. Rather than claiming that qualitative approaches are fixed and last over time, the self-reflexive anthropologist clearly states that impermanence and change is a basic inevitability of human life - particularly for a nation

⁶ From Classic Greek philosopher Heraclitus, who states that there exists no permanence or permanent reality, but that change and fluidity is the natural law of the universe; nothing exists apart from another, everything is interconnected and part of whole (Russell, 2005)

in progress of modernisation. Bhutan has experienced a vast shift since the early 1950s, and will continue to change over the next decades - maybe in even more radical ways than before.

A good example would be Bhutan's efforts for democratisation, whereby the first ever elections were held in 2008. Political parties and rallies are a new phenomenon for the Bhutanese, and only the next election will show, how satisfied the public is with its elected National Assembly. Democratisation is a long process, which implies changes and conflict, and thus, is impermanent in its outcome and reception by the public. I am strongly convinced that a survey on the public's view on democratisation and elections held before 2008 may have had different results than before the next upcoming elections - even more so, in 20 years time, when elections and the modern democratic landscape are naturalised and embodied by a new generation of Bhutanese citizens. This does not, however, render present public surveys or ethnographic research meaningless, but rather provides important clues of changes over time and space, and more importantly over several generations. The important element of analysing and presenting data is reflexivity as well as the acknowledgment that every form of social research is - as society itself - impermanent and ever-changing.

More important than the similarities between Buddhist principles and ethnographic research, is the consideration of Buddhism for data analysis. From an anthropological perspective, GNH and related policies are closely entwined with the socio-cultural framework from which these ideas emerged. In the Bhutanese context, it is particularly relevant to understand Bhutan's 'spiritual' make-up, which is a strong driving force of socio-cultural, medical, educational and economic activities (Nestroy, 2004). More than that, Buddhist values and meanings influence the Bhutanese' personal values and "*provide meaning to life*" (Donnelly, 2005: 368). This unique Bhutanese characteristic has to be included in data analysis, and has to form part of a holistic interpretation of data. Donnelly (2005) goes so far as to argue that pilot

studies have to be conducted, in order to gain understanding of the "*nature of happiness as experienced by the Bhutanese*" (ibid: 368). It is exactly in these contexts, where qualitative, ethnographic research would be a valuable addition to quantitative data (also see below: Ethnographic research of GNH).

Ethnography for Bhutan

Francoise Pommaret - herself a specialist in ethno-history and research about Bhutan - argues in her paper 'Recent Bhutanese Scholarship in History and Anthropology' (2000) that "Bhutanese anthropologists are much needed to research and write on their cultural heritage, oral traditions and material culture" (ibid: 136). She states that Bhutanese writers often "unknowingly" produce ethnographies (ibid: 132) - that is, rich descriptions and illustrations of their socio-cultural reality. These often autobiographic compositions provide important insights and understanding of Bhutanese culture. More importantly, these works record what has "previously remained oral" (ibid: 133), and thus, preserve traditional knowledge for future generations.

Notably, I want to highlight the former queen of Bhutan A.D.W. Wangchuck's book 'Treasures of the Thunder Dragon' (2006), which is a rich and vivid account of not only Bhutan and its demography, but also of the common sentiment and socio-cultural life of Bhutanese people. It is indeed full of treasures and provides the reader (Bhutanese and non-Bhutanese alike) with stunning accounts of Bhutan and its people. Similarly, Kunzang Choden's compilation of Bhutanese folktales (2002), does not only comprise of beautiful traditional tales (which have previously remained oral), but also includes an insight into how these tales are told⁷ and the role these tales play in Bhutanese society (ibid: v-vi). In the same way, Rennie and Mason's anthology of

⁷ Foreword by Her Royal Highness Princess Sonam Chhoden Wangchuck, pp. v-vi

(what Pommaret and myself would consider ethnographic) texts 'Bhutan: Ways of Knowing' (2008) is full of rich descriptions of Bhutanese life, stretching from folklore over landscape to culture and education. These works are, in my view, what Pommaret would describe as "invaluable ethnographical testimonies" (ibid: 133), which form part of a novel, written record on Bhutanese society. These historical, autobiographic texts are of uttermost importance for Bhutan, and ultimately the project of GNH.

What distinguishes ethnographic research from autobiographical records, is that the anthropologists are social scientists, who find themselves in a constant dualism between 'becoming native' and professional distance. The famous anthropologist H. Powdermaker (1966) stated:

To understand society, the anthropologist has traditionally immersed himself in it, learning, as far as possible, to think, feel and sometimes act as a member of its culture and at the same time as a trained anthropologist from another culture. This is the heart of participant observation method - involvement and detachment (cited in Brewer, 2000: 62).

Ethnographic research is a difficult task: not only must the anthropologist immerse him- / herself into an unknown community, but as a researcher, the anthropologist must also keep a certain *distance* to the society, in order to obtain an objective overview of the elements he / she intends to study. Autobiographical material may be ethnographic, but the 'native anthropologist - that is, a researcher that studies his/her own culture or community in a familiar setting - may lack detachment and objectivity. Pommaret (2000) emphasises this problem by stating that it may be difficult for Bhutanese anthropologists to resolve possible issues between their own religious and socio-cultural beliefs and critical, objective norms of research (ibid: 137). She calls on the Bhutanese to embrace anthropology, ethnography and participant observation methods in order to gain an insight into Bhutanese culture. This should be done "*alongside other researchers from around the world*" (ibid: 136), who, in my opinion, can provide the necessary detachment to enhance

autobiographical material towards objective ethnographic accounts.

I note here, that Pommaret's view of ethnography is characterised by what we in anthropology call the *Boasian* tradition - originating with German-born anthropologist Franz Boas⁸ (1858-1942) - whereby anthropologists set out and collect illustrations of socio-cultural idiosyncrasies, including records of traditional languages. These texts are a testimony of human multi-culturalism⁹, highlighting the splendour of diverse cultures. Examples are McKay and Wangchuck's (2006) piece on traditional Bhutanese medicine, Sharma's (2007) essay about Bhutanese folktales, or Pommaret's (2006) work about Bhutanese dances. Again, I emphasise the importance of such ethnographies - in particular consideration to Bhutan, which has begun to collect written records of oral traditions only fifty years ago.

Anthropology in *Malinowskian* tradition¹⁰, on the other hand, is more concerned with practical and functional approaches to ethnographic data, which is often analysed in light of theories concerned with human beings and socio-cultural life in general. As an example, I mention Rieki Crins' (2008) work "*Meeting the 'Other': Living in the Present, Gender and Sustainability in Bhutan*", which goes beyond description, and attempts to provide analyses and clues for scholars and policy makers alike.

⁸ Boas is also called the 'founding father' of American anthropology'

⁹ Multi-culturalism in this case does not mean multiple cultures in one physical area, but the multiple cultures that exist throughout the world in different parts of the globe

¹⁰ Based on theories by Bronislaw Malinowski (1884 - 1942) - a Polish-born anthropologist, who founded the British school of Social Anthropology, as well as Functionalism. He is considered (together with Boas) as one of the first Western scholars to conduct ethnographic research, and his work, most notably '*Argonauts of the Western Pacific*' (1922), remain important references for contemporary social scientists.

Besides slight differences in *Boasian* and *Malinowskian* anthropology, the paper at hand aims to describe the advantages of using '*applied anthropology*' in order to enhance measurements and operationalisation of GNH. Applied or practical anthropology is concerned with practical applications, whereby data not only serves to enrich written records of traditional, native life, but more importantly, data should enhance policy-makers understanding of the impact of policies and governance (Brewer, 2000: 147, 158). This form of ethnographic research aims to emancipate and empower the people or communities studied, with particular emphasis on the perspective of those people, who are directly under the influence of said policies (ibid: 162). By recording the voices, views, opinions and concerns of the people on the ground level - that is, the general population and body of citizens whom policies address - much can be revealed about the impact of policies. That is to say, that qualitative research could be of great importance to assess how e.g. GNH is perceived by the wider Bhutanese population, how they themselves assess its successes and failures, and how and why populations react to GNH-led policies. It is here, that qualitative, ethnographic research can enhance statistical evaluations of GNH. To quote the anthropologist A. Walker (1988):

Qualitative research copes with the flexibility and complexity of the social world better than quantitative methods, allowing it to respect and cope with diversity and recognize multiple ways in which people understand and react to interventions and policies (cited in Brewer, 2000: 162).

Ethnographic research of Gross National Happiness

Gross National Happiness implies the complexity of human happiness and well-being. But can happiness be defined and measured easily? Is 'happiness' a 'Western concept' or a universal mode of life-satisfaction, with innate qualities? Can the term 'happiness' be easily translated cross-culturally? What factors are influencing happiness in what context and for what kinds of respondents?

At first glance, the above mentioned surveys by Donnelly and Veenhoven rely strongly on specific definitions of happiness. Both Donnelly (2005: 348-9) and Veenhoven (2005: 287) assume that happiness is a functional, biological component that shares universal similarities throughout the globe, and that a person remains within a specific 'level' of innate happiness throughout time.

Anthropologists assume that human well-being is subjective and significantly varies cross-culturally. Human happiness does not exist by itself, but is intimately entwined with internal and external factors such as health, relationships, family, religion and everyday activities. As Mathews et al (2010) state: "*There is no unambiguously single pursuit of happiness - rather, there are multiple 'pursuits of happiness'*" (ibid: 1, original emphasis). Thus, anthropologists assume that people's definition of happiness vary significantly, depending on socio-cultural, socio-political and socio-economic conditions, as well as age, gender or ethnicity (Thin, 2009: 713).

Mathews and Izquierdo (2010) provide a very detailed definition of happiness from an anthropological perspective:

Well-being is an optimal state for an individual, community, society, and the world as a whole. It is conceived of, expressed, and experienced in different ways by different individuals and within the cultural contexts of different societies: different societies may have distinctly different culturally shaped visions of well-being. Nonetheless, well-being bears a degree of commonality due to our common humanity and interrelatedness over space and time. Well-being is experienced by individuals - its essential locus lies within individual subjectivity - but it may be considered and compared interpersonally and interculturally, since all individuals live within particular worlds of others, and all societies live in a common world at large (ibid: 5).

This definition lead to a very significant issue in the attempt to measure happiness in Bhutan: it is, what social scientists call the 'language bias'. For example, can words such as 'happiness' be translated or used simultaneously for 'well-being'?

'Happiness' is characterized as an ambiguous concept that entails different meanings and emotions depending on the individual, the socio-cultural environment and also, language itself (Graham, 2005: 44). The issue of translation arises in the multi-lingual context of Bhutan, which prides itself with its rich and diverse lingual heritage. Although English is the main medium of instruction in formal mass-education in Bhutan, it cannot be assumed that the whole Bhutanese population is able to speak and understand (not the mention, being literate in) English or even Bhutan's majority language Dzongkha. Thus, surveys conducted in English only, are unrepresentative for the whole nation. This has vast implications for GNH-related surveys on happiness. Donnelly (2005) warns of the difficulties to translate surveys from English to a Bhutanese dialect, and then translate it back to English. She states "*the subtleties of emotional concepts may not be directly translatable and could possibly be unfamiliar to Bhutanese people*" (ibid: 368). But the problem does not only emerge for English translations. Is it possible to translate the Dzongkha term for happiness *gha-key* into other Bhutanese dialects? Do all Bhutanese vernaculars carry the same meaning and emotional attachment than the Dzongkha word?

This is a significant critique of surveys even in the Western concept. 'Happiness' cannot be easily translated to other e.g. European languages, and even if 'native' terms can be found, they may not imply the same *emotion* or *attachment* as the English word 'happiness' would imply for English speakers. As an example, I briefly describe my own experience as a German native speaker: the English word 'happiness' cannot be translated to a single word in German language. '*Freude*' or '*Fröhlichkeit*' (two German words that can be found in dictionary translations of 'happiness') do not imply the same 'strong' emotional connotation as 'happiness' would imply in English. These two German terms are more subtle than the English 'happiness', and these 'states-of-mind' are not seen as something to particularly strive for in German-speaking society. Often, 'happiness' is translated to German as '*Glück*', which means 'luck' rather than 'happiness', implying that

'happiness' is something intangible, outside of the individual's control or concerns. This difference in meaning, could have vast implications for quantitative surveys, attempting to measure the government's impact on people's well-being and enjoyment of life.

Ethnographic evidence demonstrates that language differences have significant impacts on surveys (e.g. Hymes, 1971). Indiscriminate and culturally insensitive translation of words result in surveys measuring different meanings and connotations than intended. In order to render surveys valid, the production of surveys must entail careful consideration for native terms, with particular consideration of local socio-lingual peculiarities. The commitment of anthropologists to learn the native language and to dissect linguistic meaning in data analysis is an advantage of ethnographic research, which renders this form of research method all the more important for Bhutan's policy makers concerned with GNH.

Moreover, Donnelly (2005) acknowledges that happiness is "*an emotion [which is] intangible except by direct experience*" (ibid: 348), and it is exactly *this* experience of happiness that differs across the globe. She argues that culture determines the 'value' we ascribe to happiness, and that culture and "*social norms*" influence our perception and feeling of happiness (ibid: 349). In this context, ethnographic research can offer clues to understand these cultural differences and how they influence perception, and thus measurements, of happiness. Moreover, ethnographic research has the advantage of being able to gain a deep insight into the 'experience' of happiness, and how it is played out in daily practices. Through long-term engagement in the field and participant observation, anthropologists are able to experience this 'intangible' emotion first hand.

What distinguishes ethnographic research from quantitative surveys is that the method may impede response bias which may arise in surveys and questionnaires. Veenhoven (2005) himself acknowledges the criticism that responses to surveys only reflect "*normative notions and desires*" rather than

"indicating how much the respondent enjoys life" (ibid: 297). That is, respondents' answers only reflect their perception of e.g. how happy they *should* be, rather than how happy they actually *are*. This response bias is mainly determined by 'social desirability' and 'ego-defence' (ibid: 298): the individual - even if dissatisfied with life - will answer according to social convention, which in the Bhutanese context would bestow vast importance to score high on happiness surveys.

Similar forces are observed in surveys used for the UN's Human Development Index. For example, in Diener' and Suh's influential paper "*Why are North Americans happier than Easter Asians*" (2000), it was assumed that Western, developed nations score higher in happiness-ratings because of financial and economic security. Japan, on the other hand, scored lower on these surveys, despite the fact that Japan is one of the wealthiest nations on the globe, with an internationally competitive GDP (cited in Mathews et al, 2010: 7). Critique mainly arose from anthropologists studying and working in these nations. Baumeister (1991) for example, demonstrated that US-Americans used to score higher on happiness-scales, because they "*may inflate their reports of happiness*" (cited in Mathews et al, 2010: 7). In Japan, on the other hand, one of the most important social conventions is personal modesty. Thus, the reason Japanese score lower on happiness-surveys is not because they are 'less' happy than US-Americans, but because the social convention of humility does not 'permit' them to score higher on such scales. On the other hand, US-culture requires from the individual to be happy 'at all costs', which in turn means that even if US-Americans are dissatisfied with life, they deliberately score higher in happiness-surveys (Mathews et al, 2010: 7-8). Thus, it could be argued that survey data only tells us something about the social desirability of happiness, rather than 'real' levels of happiness. The same issues arise when we consider *who* conducts the surveys. Responses to government officials conducting surveys will reflect social conventions much more than responses to their friends, family and community. Social

desirability is a strong force which has to be critically examined in the use and analysis of quantitative surveys.

Considering these issues demonstrates that social science research is a complex matter, dealing with complex human life. All the more important is the acknowledgment of the shortcomings of using only one particular method of research. In this light, measuring, operationalising and monitoring GNH in Bhutan becomes a vastly complex endeavour, requiring immense considerations.

The accurate measurement of happiness in Bhutan is of particular importance, as these surveys provide clues of the successes and failures of the Bhutanese government to provide "*wellbeing enhancing*" policies, projects and infrastructures (Zangmo, 2008: 26). Zangmo, for example, argues that the measurement of happiness tells us something about "*how development projects impact the mind of the Bhutanese population*" (ibid: 26-7; my emphasis). Thus, it is of highest significance to carefully devise surveys including *both* quantitative and qualitative research, in order to obtain a full picture of what is happening on the ground level. The holistic approach of Buddhism may also be a guideline for social research in Bhutan: starting from an all-encompassing view and seeing respondents for what they are - not merely numbers that can be put in a chart, but complex, living beings, with their own mindset and Weltanschauung.

Summary

This paper aimed to demonstrate the advantages of using ethnographic and qualitative research alongside quantitative surveys, in order to measure, operationalise and test GNH in Bhutan. I provided a brief background of anthropology and ethnographic research, and highlighted the fact that while quantitative surveys can tell us much about *how many* people give importance to specific domains of GNH, ethnographic research would allow Bhutanese policy makers to understand how happiness, and in turn, GNH is perceived by the public, and why individuals feel the way they do. I

outlined how ethnographic research, and its emphasis on holism and a Heraclitean *Weltanschauung*, is closely related to Buddhist principles, allowing Bhutanese scholars to adapt effortlessly to this form of research. I illustrated that anthropological definitions of happiness and principles of research may foreclose linguistic bias in Bhutan's multilingual context, and that qualitative research takes into consideration the multitude of ways in which happiness, well-being and thus, GNH is perceived by a variety of individuals. Ethnographic research can shed light on how happiness is reached and embodied in daily practices and experiences, and how satisfied people on the ground level are with GNH-related policies. Finally, I referred to the rich body of what I consider ethnographic work about Bhutan, and introduced applied anthropology as an important way to measure GNH and its policies.

I want to return to the starting point of this paper, and reiterate the magnitude of GNH for Bhutan, *and* the wider world. In times of economic recession, persistent suffering, hunger and poverty, and of course, the threat of the destruction of our natural environment, Bhutan's unique project will become more and more relevant for all of humanity. In September 2010, Bhutan's Prime Minister Jigme Y. Thinley took centre stage at the UN, calling upon the world's leaders to adopt happiness as a Millennium Development goal, in order to reduce, and ultimately end "poverty, hunger and disease" (Witcher, 2010). If happiness becomes a global aim however, it is of uttermost importance to extend research of GNH and related policies beyond mere quantification, and introduce qualitative research on the ground level. If this can be achieved and GNH succeeds, it may easily create a new and better future for all of humanity and the future generations. As His Majesty (2008), the 5th king of Bhutan famously declared in his coronation address:

The future is neither unseen nor unknown. It is what we make of it.
What work we do with our two hands today will shape the future of
our nation. Our children's tomorrow has to be created by us today.

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To Join or Not to Join WTO: A Study on its Negative Impacts

*Karma Wangdi**

Introduction

The World Trade Organisation (WTO) is an institution mandated to administer WTO agreements, provide a forum for trade negotiations and a mechanism for dispute settlements and to make a periodic review of national trade policies of the member nations. Its objectives are to assist the smooth cross-border flow of goods and services, capital, labour, technology, information and ideas through agreed terms and conditions among the member countries.

Since its inception in 1995, 153 countries have joined the WTO as of 23 July 2008. Bhutan has been preparing and negotiating its accession to the WTO since 1999. The Ministry of Economic Affairs (MoEA), which has been entrusted with the accession process, informed the government that formalities are completed and is ready to accede - if the government so desires. No decision has been taken by the government as yet.

Membership to the WTO entails six general agreements: the General Agreement on Trade and Tariffs (GATT), the General Agreement on Trade in Services (GATS), the Trade Related Aspects of Intellectual Property Rights (TRIPS), the Dispute Settlement Understanding (DSU), the Trade Policy Review Mechanism (TPRM) and the Plurilateral Trade Agreement.

A member has no choice but to comply with all six as a single package, except the Plurilateral Trade Agreement, which is the only agreement that a member can have an option

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whether or not to join. In addition, there are 11 other specific agreements under GATT that a member country should abide by, namely, the Agreement on Agriculture (AoA), Agreement of the Application of Sanitary and Phytosanitary (SPS) standards, Agreement on Textiles and Clothing, the Agreement on Technical Barriers to Trade (TBT), the Agreement of Customs Valuation, the Agreement on Trade-Related Investment Measures (TRIMS), Agreement on Pre-shipment inspection, Agreement of Rules of Origin (ROO), Agreement on Import Licensing Procedures, Agreement on Subsidies and Countervailing Measures and Agreement on Safeguards. This report will discuss mainly issues related to GATT and GATS. It will also briefly discuss DSU and SPS.

Costs of Accession to the WTO

Membership of the WTO allows for better market access, a level playing field, policy reforms, access to justice and technical assistance. However, empirical evidence suggests some members have benefited more than others. Besides, small countries face difficulties in meeting the cost of the WTO compliance, in addition to the loss of policy autonomy, because policies have to be aligned to that of the WTO.

Bhutan will face a tremendous strain in meeting the implementation challenges due to financial, technological and human resource limitations. Although there is some flexibility in the implementation of these agreements, such as the phased implementation system and a longer time period for the implementation for the least developed countries (LDCs), it will be very difficult to establish institutions that are capital intensive such as for SPS measures.

Bhutan will have to both establish and manage a WTO unit within Bhutan. This will demand additional resources, both financial and human, apart from the annual membership fees. For instance, it is estimated that Cambodia may need US\$ 59.6 million for implementing all the WTO commitments during the 10 year period from 1999-2009. Bhutan will also find difficulty in fielding personnel for the frequent WTO

meetings at general council level, which on average take place every two months. This will be very expensive for a country like Bhutan. The costs will far outweigh the benefits accruing from attending such meetings, as Bhutan has very small stake in the international trade due to limited export potential.

However, if Bhutan decides not to attend such meetings, the country will still have to accept and abide by decisions of these meetings even if it turns out to be least favourable to Bhutan.

Therefore, before deciding to join the WTO, Bhutan should look at a number of issues such as our existing industrial base, infrastructure, human capital and technical expertise, to face challenges posed by such a liberalised trading system. These will be discussed in the subsequent paragraphs.

While negotiating issues at the WTO, the team should consist of technical and professional experts in specific areas such as agriculture, health, education, international law and trade, in order to gain a fair deal. Each member of the team should be well informed in their respective fields to be able to assess the full implication of decisions on the Bhutanese economy and society. They must be able to advise the national government to formulate sound policies to counter any negative implication arising from the larger international policies.

Limited technical or professional capability of the negotiators in assessing the long-term consequences of Bhutan's accession will certainly have adverse implications in the future. Bhutan should assess the availability and affordability of knowledgeable lawyers to deal with international law, experts and specialists to deal with science and technology associated with WTO, such as sanitary and phytosanitary (SPS) measures, and above all, a resource base for new infrastructure, before joining the WTO. Without these elements in place Bhutan will be under serious strain to meet WTO obligations and requirements.

Negotiators must be able to resist pressure from the multinational companies of developed countries both overt as well as covert. It has been alleged that delegates from the United States of America (U.S.A.) and European Union (E.U.) pressured developing countries to open up their markets, basically to be used as a dumping ground for heavily-subsidised and industrially-produced agricultural products, during past WTO Ministerial Meetings and general council meetings. There are also claims that powerful countries are pressurising the developing and LDCs to open up social and public services to privatisation.

Three out of four '*Singapore issues*', namely, trade and investment, competition policy and transparency in government procurements have created deadlock between the developed and developing countries. This issue began from the 1996 Singapore Ministerial Meeting. The succeeding WTO Ministerial Meetings in Seattle in 1999, Doha in 2001, Cancun in 2003 and Hong Kong in 2005 failed to reach consensus between the developed and developing countries. The Seattle talk was even reported to have met with thousands of protesters. The infamous 'Green room' process, 'backroom' negotiations, ad hoc presentation of issues and other coercive pressure tactics, including the tabling of multiple negotiations to take advantage of limited negotiating resources of smaller countries, indicates how developed countries are bent on benefiting from the WTO negotiations at the cost of smaller and weaker countries.

Ideally, the WTO and its negotiation processes should be responsible for creating a favourable trade environment for the member countries by removing trade barriers and discriminations resulting in fair trade policies. Even the WTO preamble mentioned its objectives as 'raising the standard of living, ensuring full employment, sustainable use of resources, protection and preservation of environment and equitable share of international trade growth among the member countries'.

However, evidence suggests that while some countries have benefited, others have lost out by joining the WTO, although most never admit this. The retrenchment of Nepalese workers in the garment industry and the rural exodus of Chinese agricultural workers is a good example of the negative implications of WTO accession on the people in general and disadvantaged groups in particular.

Economic Dependency

There is also evidence indicating the increasing inequalities in developing countries and LDCs after their accession to the WTO (Guerrero, 2006; Gilbert, 2001; Cling et al, 2009 & Ravi, 2009). A study by Chen and Ravallion (2004) on the welfare impacts of China's accession to the WTO "...found that almost 90 percent of urban households gain from WTO accession, while over three-quarters of rural households lose out..."

As a result, Bhutan's accession to the WTO would only increase regional inequalities as the accession to the WTO will only benefit industrialists and cash croppers. The majority of farmers and small scale industrialists will gain no benefit as they do not have any marketable surplus. In addition, it would also discourage farming as cheap agricultural products from India, China and Vietnam would flood the Bhutanese market due to their economies of scale and availability of cheap labour.

Superior production technology and mass commercial production of agricultural products, combined with heavy subsidies in developed countries, all help to keep prices low on the international market. A steady decline in international commodity prices has been observed since 1996 (Pal, 2004, NAAS, 2006). The availability of cheaper products in general, and vital food grains in particular, will undermine Bhutanese rural livelihoods. It would also negatively impact on the existing unfavourable balance of payments (BoP) through two channels – a reduction of exports and an increase in imports.

Tsai (2006) mentioned that Taiwan recorded an increase in both net import volume and value in the year after its

accession to the WTO. However, net export volume saw a reduction, although the value registered an increase. The decrease in exports indicates the challenge of selling domestic products on the international market due to steep competition.

Bhutan would also face the same decrease in exports due to steep competition from similar products on the international market and Bhutan's low competitiveness. Difficulties will also be faced on the domestic markets due to increased imports as a result of tariff cuts and the removal of other trade barriers. This will seriously undermine the national economy and Bhutanese agricultural households.

Bhutan's overall balance of trade (export minus imports) has been consistently negative, with one exception, in the year 2007. However, the positive trade balance was only caused by the commissioning of the Tala hydropower project. The negative trade balance returned in 2008. Therefore, Bhutan's accession to the WTO will further widen the gap between exports and imports.

Bhutan's accession to the WTO will only increase its dependency on external goods and services, including essential foodstuffs. The failure to keep agricultural activities relevant and profitable for the Bhutanese through appropriate policy interventions will not help Bhutan. In fact, the increased dependency on imported food could put the country at the risk. For instance, the ban on the export of certain rice by the Indian government a few years ago nearly created a famine in Bangladesh. Although the ban was lifted after protests by Bangladesh, they had to bear a price increase of about 60%.

The offer of services under the WTO agreements will attract Direct Foreign Investments (FDIs) from multinational companies (MNCs) abroad. This will boost economic development in the short run. However, economic development *per se* will not guarantee welfare if the benefits of such development fail to be distributed equitably. FDIs in most cases are found to have been invested in developed

regions, where the investment environment is most favourable. For instance, it was found that foreign banks in China were concentrated in Chinese coastal areas, which are comparatively far more developed than other regions (Gilbert, 2001). Such preferential investment patterns, if not checked through relevant FDI policies, will aggravate existing regional economic imbalance in Bhutan.

Bhutan should also be concerned if external investments pour in here (as they did in China,) and about the government's ability to manage and accommodate the influx of FDIs. Bhutan needs to have policy instruments and remedial measures in place.

The entrance of foreign companies in developed and industrial areas due to enhanced market access, has created wage differences between urban and rural areas. Gilbert (2001) observed a reduction in rural wages by one to two percent as a result of tariff liberalisation in agriculture alone. As a result, the rural destitute go in search of a better life and economic opportunities in cities and urban areas. If proper policies such as labour mobility restrictions and alternative livelihood opportunities are not put in place, it will result in extended problems of rural-urban migration such as the collapse of the agriculture sector, an increase in urban unemployment, labour constraints in specific areas, over crowding and strain on social services.

Legal and Institutional Requirements

The accession to the WTO may require several local acts and regulations to be either amended or abolished in order to align them with the WTO rules and regulations. For instance, China had "amended more than 2,500 of its national laws and regulations and abolished more than 800 others to fulfil WTO rules" within the four years since its accession in 2001 (Guerrero, 2006).

Bhutan has listed 35 laws, acts and regulations that will need to be enacted and adopted to fulfil various WTO regulations in its *Legislative Action Plan* dated 13 July 2006 (See Annexure

9). More will follow as and when the local laws and regulations come into conflict with the WTO's. This will have huge implications on our economy, society and environment.

To fulfil the WTO requirements will require huge financial resources. Bhutan may also have to compromise her national interests, if the existing laws and acts have to be amended and abolished (like in China), even if the existing ones had been in favour of local people, the environment and the economy. This will draw huge resources, undermine the independence to act, and above all will be guided by external forces even if it is against the interest of the people and the country.

A study by Sauve (2005) estimated that Cambodia may need about US\$ 4.1 million for implementing the WTO customs valuation agreement alone from 2003-2009. The overall cost estimate for implementing all WTO commitments was about US\$ 59.6 million over a period of 10 years from 1999-2009.

Economic liberalisation will attract private investment and boost privatisation. Essential services, such as health care, education, food, water, etc will attract more private investment as profits will be higher due to the demand. The monopolisation of such goods and services will present a serious challenge to the national governments in meeting the peoples' needs. The WTO's General Agreement on Trade in Services (GATS) had listed about 160 services, including important public services, to be liberalised. These services will be turned into private for-profit corporations, blaming current economic inefficiencies and protectionisms. The poorer sections of society will not be able to avail themselves of these services and will consequently push them further down the hierarchy of economic and social ladders.

The opening up of the economy to the private sector will have both positive and negative impacts on the quality and availability of services. Privatisation will, of course, improve the quality of services as they will face increasing competition and without quality improvements, it will not survive in the market. However, it will be a double-edged sword. As more

people opt for private services, the demand for public services will decline. As a result, public services will have lesser policy attention and quality will further deteriorate. The more serious question is, who uses public services? As the state owned or managed public services are mostly being used by the poorer sections of societies, such as state owned education in India, the poor will suffer and the inequality will be further widened.

Agriculture and Food Security

The future of agriculture is one of the most important sectors that Bhutan should keep in mind during trade negotiations, if we are to accede to the WTO. Although the share of agriculture (excluding livestock and forestry & logging) to the GDP was just 9.1% in 2008, the number of Bhutanese people who depend directly on agriculture for their survival is very large. Of the 312,700 people who are currently employed, 65.4% are in agriculture (NSB 2008) and the proportion of overall people depending on agriculture could be even be higher.

The argument that Bhutan will not be a food self-reliant country with only 7.8% of arable land, and therefore should liberalise the sector in order to make food available and affordable through imports, is not the real issue concerning Bhutan.

The real issue will be the displacement of agricultural households, which will lead to rural-urban migration and its associated problems. Due to the hopeless situation of life in general and stagnant agricultural production - particularly in rural China after accession to the WTO - China saw a rural exodus comparable to that of Japan during the period of post-war industrialisation. It is estimated that over 300 million Chinese will migrate from rural areas into cities before 2020 (Guerrero, 2006).

The argument that Bhutan will be able to make food affordable and available through increased market access for external goods is also unrealistic. For instance, Bhutan's

current applied tariff on rice is 50%. Bhutan had negotiated a tariff rate for rice at 100%. If the Bhutanese government raises the tariff for rice to a level to protect agricultural households, this policy will make rice 33% more expensive for non-agricultural consumers (increasing tariff for rice from 50% to 100%). If Bhutan does not provide some sort of protection through a tariff, Bhutanese rice does not even stand a chance even in the Bhutanese market.

For example: The current price of rice at border is Nu. 13. Currently at 50% tariff, the price of rice in the domestic market comes to Nu. 19.5. However, if we apply 100% tariff, the price of rice will be increased to Nu. 26.

If Bhutan joins the WTO, the result will impact over 70% of the Bhutanese and force them to leave the rural areas to the already over-crowded and environmentally-stressed urban centres. Since 52.1% (PHCB 2005) of the rural people are illiterate, there will be huge surge in unemployment as rural people will have few employable skills in urban areas. This will create a vicious circle of illiteracy, unemployment and poverty, which in turn could well trigger political instability.

The other way through which developing countries' agriculture sectors have been adversely affected has been through falling prices. International prices for agricultural products have been declining since 1995 (Pal, 2004, NAAS, 2006). Agricultural households in developing and LDCs were hardest hit because their respective governments neither have the mechanisms nor the resources to support farmers by way of subsidies or policy reforms.

On the other hand, developed countries have completely ignored WTO rules and continue to provide subsidies (Lindqvist et al, 2006, Sharma, 2003 & Pal, 2004). Contrary to what has been agreed during the Uruguay round of talks, it was noted that the EU, the USA and other OECD had increased subsidies to their farmers. It is also noted that 60% was trade distorting support (NAAS, 2006 & Pal, 2004). By quoting the OECD report, Pal (2004) also highlighted "that in EU, USA, Canada and Japan the top 25 per cent of farmers

receives an average 70 percent of total agricultural subsidies respectively.” However, if the agriculture subsidies were lifted, the price of food on the international market would increase creating a serious impact on food importing countries.

The WTO have categorised agricultural subsidies into two types – legal and illegal. Subsidies that do not directly enhance exports such as research and development, pest and disease control, extension and training services, irrigation, farm road construction, etc are WTO-legal subsidies and are allowed by the WTO.

Subsidies that directly promote exports such as price support and direct payments on export performance are illegal and as such are not allowed. This categorisation seems to have been purposely designed by the richer countries as they are able to provide such subsidies while developing and LDCs are not in a position to do so. This puts farmers of developing and LDCs in a disadvantaged position as governments are unable to provide agricultural subsidies that are allowed by the WTO. This is a direct contradiction of the WTO’s objective of re-leveling the playing field.

The liberalisation of agriculture will also expose a country like Bhutan to the risk of food insecurity because of its limited arable land. With increase in market access and commercialisation of agricultural practices, farmers will be increasingly encouraged to grow single cash crop production, such as apples, oranges, areca nuts, cardamoms, and potatoes. Although such a shift might accrue benefits of comparative advantage and economies of scale, it will aggravate the shortage of certain foods such as rice, which is the main staple diet of the Bhutanese people. Increasingly, traditional agricultural farms where cereal production used to take place will be converted to cash crops. If a decrease in cereal production occurs, this will create a food crisis as the Bhutanese rely on cereals for 53% of their total caloric intake. (Tobgay et al, 2008).

Industrial Sector

Industries in developing countries are characterised by high prices, the cost of production, inferior design and inefficient supply chains with ineffective marketing strategies. As a result, products are uncompetitive in the international as well as local markets, unlike the industrial products of developed countries. The intense external competition in the liberalised market often eliminates local industries. For instance, Nepal saw a drastic drop in garment exports to the U.S. from 80% to 42% within 11 months after the end of the Multi-Fiber Agreement (Sapkota, 2008). All in all, over 950 factories closed and over 100,000 workers were laid off (ibid).

Similarly, silk production during post-WTO period resulted in negative growth in India. One of the reasons cited for this was the increasing imports from China (Umesh et al, 2009). The growth rate of export of Indian silk commodities fell from 22.1% in pre-WTO to 15.4% in post-WTO period, while the rate of imported silk into India had increased. Exports declined by 7.9% during 1995-96 to 2004-05 (Pandey, 2008), while the Indian GDP growth rate (at current prices) declined by 4.4% after accession to the WTO (from 14.7% in 1991-94 to 10.3% in 1995-2004) (ibid).

The National Statistics Bureau (NSB), in its compilation of national accounts, has classified the industrial sector into four groups: 'mining and quarrying', 'manufacturing', 'electricity and water' and 'construction'. The sector's contribution to the GDP in 2008 was 41.4% (NSB, 2009b). However, if we exclude electricity, the contribution was 22.4%.

Although, the share of Bhutanese manufacturing industries to GDP was just 8.5% in 2008, its contribution in terms of employment (4.7% of the total employed) and export earnings can help ease the problem of increasing unemployment and negative trade balance for a small and import dominated economy like Bhutan. Therefore, Bhutan should be able to protect itself from external competition as these industries are still in their infancy. The only available option, upon

accession to the WTO, to protect its domestic industries is through tariffs. Although non-tariff barriers are allowed to be used for specific purposes for LDCs, it is not a permanent solution. Moreover, Bhutan may shortly graduate from LDC status and cannot have preferential treatments that are offered to LDCs once it graduates from LDC status.

Calcium carbides, cement, iron and steel, particle boards, Ferro silicon and fruit juices are among the top 25 products in terms of value that Bhutan has exported in 2008, apart from electricity. Since production of most of these products is energy intensive, the availability of cheap electricity in Bhutan compared to neighbouring countries will attract FDIs in these industries. Due to the availability of cheap electricity, foreign industries will be encouraged to set up similar production units as Bhutan cannot discriminate the prices of electricity between local and foreign farms. Such differential treatment is not permitted under the national treatment clause. With Bhutan's accession to the WTO, these industries will be exposed to steep competition through tariff reduction and entry of FDIs. In addition, foreign production farms will have an edge over similar Bhutanese farms due to their technological superiority.

Three types of cement, namely, '*Portland pozzolana cement*', '*Ordinary Portland cement*' and '*Portland slag cement*' were among Bhutan's top 25 exports in 2008. Currently, 99.8% of Bhutanese cements are exported to India. Bhutan had negotiated bound tariff for all types of cement at 60%, except for aluminous cement at 50%. The contribution of cement to the GDP was 3.3% in 2008. However, if Bhutan accedes to the WTO, Bhutanese cements will have to face competition. Of the iron and steel products, free cutting steel, and semi-finished products of iron or non-alloy steel, plus ingots are among the top 25 exports. Bound tariffs for these products have been negotiated at 30%.

Market Access

Once a member of the WTO, a country should provide market access opportunities to other member countries. In return, the country shall also have market access in the member countries. The level of access to markets in each member countries is determined by the agreed tariff rates—high tariff rates indicate limited market access and vice versa. The same rates should be applied to all the WTO member countries under the most favoured nation clause, except among members of free trade agreement or special access to developing and LDCs. The degree of market access is also determined by the binding coverage. In principle, besides tariffs, a WTO member country cannot resort to non-tariff barriers (NTBs), except special safeguard measures (SSG) if the country has reserved this right during the accession. However, NTBs such as import bans, quantitative restrictions (QRs), discriminatory rules of origin (ROO) and product standards or discretionary import licensing are often found to be used for controlling the influx of imports.

The degree of market access through *tariffication* depends on two elements: tariff rate and *binding coverage*. There are two types of tariff rates: *bound* and *applied*. Bound tariff is the maximum rate beyond which a country can not increase, unless it is renegotiated and agreed among the member countries. On the other hand, the applied tariff rate is the one that is actually applied. The applied tariff rate is always lower than the bound tariff rate and the maximum applied rate can not increase beyond the bound tariff rate. If applied tariff rates are increased beyond bound rates without prior renegotiation and agreement, the aggrieved party or parties have to be adequately compensated. Binding coverage is the proportion of commodities that have tariff rates.

Bhutan was able to negotiate bound tariff a little higher than Nepal and the Maldives, but much lower than Bangladesh for agricultural commodities (**see table 1**). However, Bhutan has bound all 696 commodities (100% binding coverage). This will limit Bhutan's future policy flexibility. In order to control

challenges such as import surge and falling prices, Bhutan may need to reserve her freedom to use policy instruments such as SSGs and Tariff Rate Quotas (TRQs) at the time of accession - if Bhutan chooses to join the WTO. However, these rights are rarely granted in the WTO negotiations. Through TRQ, Bhutan could achieve two objectives. The application of TRQ on important agricultural commodities like major cereals can protect these commodities from uncontrolled external competition, and can also make essential food commodities available and affordable to non-agricultural consumers.

Similarly, Bhutan's non-agricultural bound tariff rate was negotiated at 26.4% with all 4,528 commodities bound (100% binding coverage). In total, Bhutan has assigned tariff rates for all 5,224 commodities (100% binding coverage) with a simple average bound tariff rate at 29.4%. India has binding coverage of 73.8% with simple average bound tariff rate at 49.0%, Bangladesh has 15.5% binding coverage with simple average bound tariff at 169.2% and Thailand has 74.7% binding coverage with simple average bound tariff at 28.6%. Meanwhile, economically weak countries like Cambodia and Nepal have a binding coverage of 100% and 99.4% respectively, with the simple average bound tariff at 19.0% and 26.0% respectively. Bhutan's negotiating team seems to have compared Bhutan with Cambodia and Nepal for presenting their arguments during the negotiations. This may not yield an ideal position for Bhutan. A better reference would have been countries whose economies had succeeded after the WTO accession, if any, or those economies who had kept their tariff high or limited liberalisation such as Bangladesh. **Refer annexure 1** to see difference in tariff rates and binding coverage for few selected countries.

The simple average tariff rate, both applied and bound, is much lower in developed countries than developing and LDCs. However, it was noted that the low tariff in developed countries have not helped developing and LDCs to gain a market share in developed countries due to the presence of concealed tariffs and NTBs like quota restrictions. Developed

countries are accused of fixing very low tariff rates for commodities which developing and LDCs don't produce competitively or on those products that are hardly imported in substantial quantities or on those products that are not produced at all. Moreover, they maintain *tariff peaks* by assigning very high tariff rates, as high as 250 percent, on critical product lines which result in the increase of product price by as much as three times the normal price inside their country. This is done with the aim of making the imported products uncompetitive in their market so that their domestic products can be protected.

Table 1: Tariff profiles of some selected countries

Country	Accession year	Summary	Total (%)	Ag (%)	Non-Ag (%)
U.S	1995	Simple average final bound	3.5	4.8	3.3
		Simple average MFN applied (2008)	3.5	5.3	3.3
		Binding coverage	100.0		100.0
Japan	1995	Simple average final bound	5.4	24.0	2.5
		Simple average MFN applied (2008)	5.4	23.6	2.6
		Binding coverage	99.6		99.6
Canada	1995	Simple average final bound	6.5	14.5	5.3
		Simple average MFN applied (2008)	4.7	11.5	3.7
		Binding coverage	99.7		99.7
Maldives	1995	Simple average final bound	36.9	48.2	35.1
		Simple average MFN applied (2008)	20.4	18.3	20.7

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		Binding coverage	97.1		96.7
Mongolia	1997	Simple average final bound	17.6	18.9	17.3
		Simple average MFN applied (2008)	5.0	5.1	5.0
		Binding coverage	100		100
Nepal	2004	Simple average final bound	26.0	41.5	23.7
		Simple average MFN applied (2008)	12.7	14.8	12.4
		Binding coverage	99.4		99.3
China	2001	Simple average final bound	10.0	15.8	9.1
		Simple average MFN applied (2008)	9.6	15.6	8.7
		Binding coverage	100		100
India	1995	Simple average final bound	49.0	114.2	34.7
		Simple average MFN applied (2008)	13.0	32.2	10.1
		Binding coverage	73.8		69.8
Vietnam	2007	Simple average final bound	11.4	18.5	10.4
		Simple average MFN applied (2007)	16.8	24.2	15.7
		Binding coverage	100		100
Philippines	1995	Simple average final bound	25.6	34.7	23.4
		Simple average MFN applied (2008)	6.3	9.7	5.7
		Binding coverage	66.8		61.8

Bangladesh	1995	Simple average final bound	169.2	192.0	34.4
		Simple average MFN applied (2008)	14.8	17.6	14.3
		Binding coverage	15.5		2.6
Bhutan	--	Simple average final bound*	29.4	48.7	26.4
		Simple average MFN applied (2008)**	21.9	41.4	18.9
		Binding coverage	100		100

Sources: WTO, “World Tariff Profiles 2009”

* Simple average final bound rates from WTO accession documents, MoEA; ** Simple average MFN applied from World Tariff Profiles 2009

It is also often accused by developing countries that the advanced countries levied higher tariff rates for processed agricultural commodities than the raw agricultural commodities. The difficulty in market access for processed agricultural products due to higher tariff and application of stringent SPS standard in developed countries discourages the value addition prospects for developing and LDCs. This will force developing and LDCs to export raw agricultural products thereby compromising their profitability.

Tables 2, 3 and 4 presents Bhutan’s bound tariff rates by tariff lines for agricultural, non- agricultural and combined products.

Table 2: Agricultural bound tariff rates by tariff lines

Bound tariff rates	No. of tariff lines	% of tariff lines
150 percent	5	0.7
100 percent	34	4.9
60 percent	230	33.1
50 percent	94	13.5
40 percent	142	20.5
30 percent	169	24.4
20 percent	20	2.9
Total	694	100.0

Source: MoEA, WTO accession working files

Table 3: Non-agricultural bound tariff rates by tariff lines

Bound tariff rates	No. of tariff lines	% of tariff lines
100 percent	4	0.1
80 percent	1	0.0
70 percent	16	0.4
60 percent	16	0.4
50 percent	77	1.7
40 percent	1312	29.0
30 percent	1139	25.1
20 percent	696	15.4
10 percent	1269	28.0
Total	4530	100.0

Source: MoEA, WTO accession working files

Table 4: Combined bound tariff rates by tariff lines

Bound tariff rates	No. of tariff lines	% of tariff lines
150 percent	5	0.1
100 percent	38	0.7
80 percent	1	0.0
70 percent	16	0.3
60 percent	246	4.7
50 percent	171	3.3
40 percent	1454	27.8
30 percent	1308	25.0
20 percent	716	13.7
10 percent	1269	24.3
Total	5224	100.0

Source: MoEA, WTO accession working files

Bhutan's highest agricultural tariff rate was negotiated at 150% for five commodities which are all tobacco and tobacco related products, namely, *Cigars, cheroots and cigarillos, containing tobacco, Cigarettes containing tobacco, Other (including Biri, Smoking tobacco, whether or not containing tobacco substitutes in any proportion, and "Homogenised" or "reconstituted" tobacco.* From the economic point of view, such high tariff rate for tobacco will have no direct economic benefit, because Bhutan neither produces tobacco (to necessitate protection), nor does it have a large consumer base (to benefit from duties levied) although there might be some indirect benefit through better health.

The second highest bound tariff rate was negotiated at 100%. Commodities under this tariff band include chillies, citrus fruit (oranges), apples, rice and fruit and vegetable juices which are important source of income for Bhutanese farmers besides others. However, the bound tariff rate for maize and related products was negotiated at 40% and potatoes at 60%. This should be a serious concern as a large majority of people in eastern Bhutan depend on maize for their livelihood.

Similarly, the tariff rate for potatoes is not very protective considering the increasing dependency on potato by Bhutanese farmers. See table 5 below for tariff rates for cereals.

It is evident from tables 3 and 4 that Bhutan does not have any hidden tariff for any of the tariff lines. Tariff rates are not higher than 100% even for commodities of which Bhutan is a net exporter. Should Bhutan need to protect its critical agricultural commodities such as rice, maize, chillies, potato and vegetables in future, it has to re-negotiate the tariff rates. However, it is very unlikely that Bhutan will be able to re-negotiate bound tariff to higher levels than what has already been decided.

If no protection of Bhutanese agricultural commodities are provided through tariffs, most Bhutanese agricultural commodities will not be able to compete in the market in terms of price. For instance, the comparison of current average retail price of rice shows that Bhutanese rice can not compete with the imported rice from India. The average retail price of Bhutanese rice is Nu. 46.3 while the average retail price of rice imported from India is Nu. 26.5. See annexure 10 for retail prices of rice. Similarly, Bhutanese dried chillies will not be able to compete with imported chillies from India. The average retail price for Bhutanese dried chillies is three times higher than the imported ones (Nu. 370 per Kg for Bhutanese as against just Nu. 121 per Kg for imported chillies from India).

On the export front, Bhutan has a narrow range with the top 10 export products accounting for more than 81.5% of the total value of exports in 2008. The total consists of 370 commodities with export value ranging from over Nu. 11 billion to just Nu. 30. The export value for 186 commodities (49.7%) was below Nu. 0.10 million and 70% (259 commodities) was below Nu. one million in 2008. The average tariff rate would be a misleading figure unless it is looked at individual tariff lines.

Table 5: Bound and applied tariff rates for cereals

BTC Code	Section	Commodity	Applied Tariff Rate	Bound Tariff Rate
1001.10	Cereals	Durum wheat	50	60
1001.90	Cereals	Other (wheat)	50	60
1002.00	Cereals	Rye.	50	50
1003.00	Cereals	Barley.	50	60
1004.00	Cereals	Oats.	50	60
1005.10	Cereals	Seed (maize)	50	60
1005.90	Cereals	Other (maize)	50	60
1006.10	Cereals	Rice in the husk (paddy or rough)	50	100
1006.20	Cereals	Husked rice (brown and red)	50	100
1006.30	Cereals	Semi-milled or wholly milled rice, whether or not polished or glazed	50	100
1006.40	Cereals	Broken rice	50	100
1007.00	Cereals	Grain sorghum.	50	60
1008.10	Cereals	Buckwheat	50	60
1008.20	Cereals	Millet	50	60
1008.90	Cereals	Other cereals	50	60
Average			50	70

Source: MoEA, WTO accession working files

Bhutan's top 10 agricultural exports include 'vegetable fats and oils and their fractions' (worth Nu. 527.20 million), 'oranges' (Nu. 246.37 million), 'mixture of juices' (Nu. 144.32 million), 'potatoes' (Nu. 119.72 million), 'cordyceps sinensis' (Nu. 117.83 million), 'mineral waters' (Nu. 61.17 million), 'animal and vegetable fats and oils of vegetable origin' (Nu. 61.17 million), 'apples' (Nu. 60.42 million), 'beer made from malt' (Nu. 41.38 million) and 'ginger' (Nu 22.75 million). Other agricultural products that were exported in large quantities include whiskies, betel nuts, rice, mushrooms (matsutake),

fruit juices and vegetables. These products seem to exhibit potential export growth. Therefore, Bhutan may need to avail export enhancing market access measures such as duty-free-tariff-free (DFQF). Bhutan should also reserve the right to resort to SSG measures and other restrictions, such as TRQs to control imports of these products. If possible Bhutan should leave important agricultural commodities without assigning tariff so as to have policy flexibility in the future, if the need arises to protect it from external competition.

WTO member countries are categorised into three levels, namely, *developed*, *developing* and *LDCs*. Tariffs and objectionable subsidies have to be reduced by an agreed proportion depending upon the level of country's development stage. LDCs are exempted from reduction requirements. Bhutan, by virtue of being LDC need not cut her tariffs and subsidies. However, if Bhutan graduates from LDC status, Bhutan will be required to implement tariff and subsidies reduction requirement. As tariffs get reduced, imports will become cheaper and the import volume will increase. This will pose a serious threat to Bhutanese domestic products, which are in low competitiveness due to technological backwardness and lack of economies of scale. In addition, the prices of locally produced goods will increase significantly, resulting in low competitiveness, as Bhutan is unable to provide any direct subsidies to its producers.

The other problem Bhutan can expect to face by joining the WTO is the diversion of land use. The increase in imports of cheap agricultural commodities will place similar Bhutanese commodities at a comparative disadvantage. This could lead to the diversion of land use for production for cash crops. If left unchecked, this may lead to over dependence on imported food. The consequences of too much dependence of food from external trade can be too grave a risk to overlook.

Even if Bhutan is able to negotiate favourable market access conditions, the benefits would be minimal due to limited, marketable surpluses resulting from limited production capacity. Bhutanese exports will also face difficulty in

transporting its products due to geographical location and lack of efficient transport infrastructure and facilities. The huge transportation costs for Bhutanese products in reaching foreign markets will act as a tariff barrier for Bhutanese products. Unless Bhutan is able to improve and strengthen its transport infrastructure, the country will not be able to reap the benefits of increased market access.

There also seems to be some misunderstanding regarding the freedom to impose taxes to control incessant imports or exports. Any trade distorting taxes are not allowed under the WTO regime. In Russia, government progressively increased export taxes on raw timber in an effort to develop its wood based industries. However, Finnish and Swedish wood processing industries and government representatives objected to this practice. This issue prominently features in Russian WTO accession negotiations (Tarr). This suggests that taxation, for the purpose of trade distortion, too is illegal under the WTO. Therefore, taxes instituted for the purpose of limiting trade will not be allowed after the accession to the WTO.

Service Sector

Like goods, services are also required to be liberalised upon joining the WTO through service negotiations. There are 12 categories of sectors with a total of 155 sub-sectors. Bhutan had made market access offer for 76 services out of 155 total services as shown in the table 6 below. A country needs to specify commitments for market access and national treatment in services. There are three types of commitments that a member country can make in respect to market access and national treatment: a commitment with no limitations (“none”), partial commitment (with limitations spelled out) and no commitment (“unbound”). Market access and national treatment commitments once negotiated and agreed are bound, like bound tariff rates. These commitments determine the degree of openness (or closeness) of the service market. Therefore, it is better for a country to leave, as much as possible, its services unbound. This will enable the

government to exercise its freedom to impose limitations, either on market access or national treatment or both, if the need arises in the future.

Table 6: List of service sectors and sub-sectors committed for market access

Sector	Total sub-sector	No. of sub-sectors committed
Business services	46	25
Communication services	24	15
Construction and related engineering services	5	2
Distribution services	5	4
Educational services	5	4
Environmental services	4	4
Financial services	17	15
Health related and social services	4	0
Tourism and travel related services	4	2
Recreational, cultural & sporting services	5	0
Transport services	35	5
Other services not included elsewhere	1	0
Total	155	76

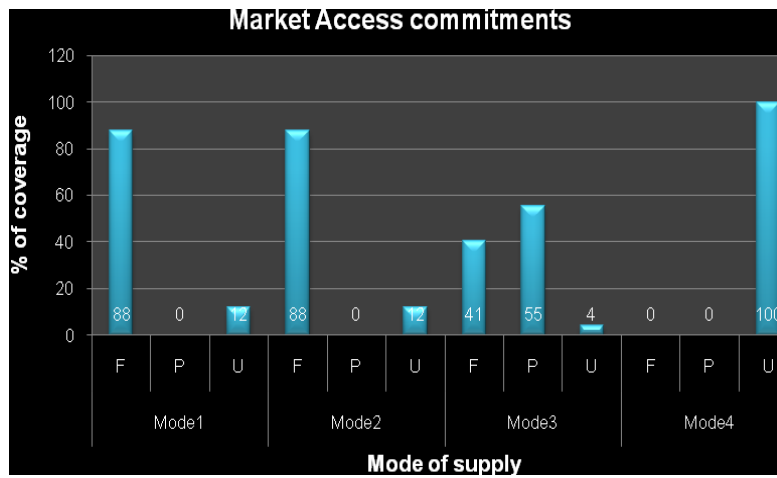
Source: MoEA WTO accession documents

Majority of services under Mode 1 and Mode 2 are open without any market access limitations and national treatment exceptions (See figure 1 and 2). Almost all the services under Mode 3 have either full or partial market access commitments. Only 4% (3 out of 74) of services under Mode 3 are left unbound which is the lowest among the four modes. This indicates that the WTO members are seeking more commitments for commercial presence. However, all the

services under Mode 4 are left unbound both for market access and national treatment commitments.

Marchetti (2004) have found that LDCs have a higher proportion of full market access commitment for all modes of services than developed, developing and transition economies. Bhutan's services offers are even more impressively liberal compared to the existing WTO members, except services under Mode 4. Bhutan's full market access commitments for services under Mode 1, Mode 2 and Mode 3 are even higher than the average of the LDC WTO member countries. This impressive full liberalisation may restrict Bhutan's future policy autonomy.

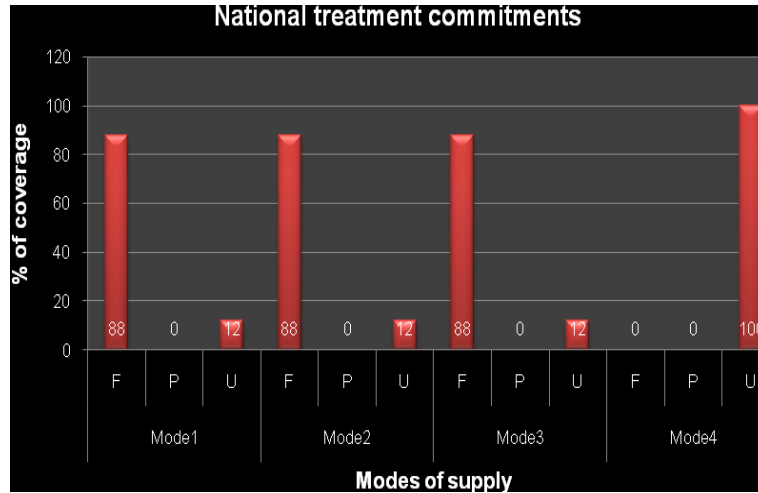
Figure 1: Structure of Market Access Commitments by Mode for 74 Service Sub-sectors



Source: MoEA WTO accession documents

Note: F= Full commitment; P= Partial Commitment & U= Unbound.

Figure 2: Structure of National Treatment Commitments by Mode for 74 Service Sub-sectors



Source: MoEA WTO accession documents

Note: F= Full commitment; P= Partial Commitment & U= Unbound.

GATS offer improved access to foreign markets, stable market access conditions through binding commitments and dispute settlement in the event of any disagreements. However, Bhutan cannot foresee any benefit from GATS negotiations as Bhutan has no services that can be exported other than tourism. The benefit from enhanced market access through GATS negotiations will be for those economies that have a well developed service sector. Bhutan's service sector (which is also referred to as the tertiary sector) accounts for about 39.7% of the GDP in 2008 (NSB, 2009a) and is the largest contributor among the three sectors. Since almost all the service sectors in Bhutan are small, and usually managed by the family, it will not be able to face any competition.

Sanitary and Phytosanitary Standards

Sanitary and Phytosanitary (SPS) measures refer to the food standards that a country adopts to protect human, animal and plant life and general health within their territory against contaminated and unsafe food. Based on the set standards, governments can restrict the import of products that do not meet the required standard. Under the national treatment clause, the same standard should also apply to domestic products. As such, if the required standard is not met, domestic production should also be stopped.

Although designed in good spirit, the SPS is often accused of being used as a trade barrier by some countries to protect their domestic industries, and their investors abroad, and also for favouring their favourite trading partners. SPS will be more of a burden than a benefit if we look at the cost of running such monitoring programmes. For example, the annual cost of running the Hazard Analysis Critical Control Point (HACCP) programme in Bangladesh is reported to be about US\$ 2.4 million.

Developed countries, due to the availability of resources and superior technology, were able to enhance their product standards. Developed countries tend to fix the SPS standard both stringently and notoriously high. As there is no upper limit for SPS standards, provided there is scientific justification to it, a country can adopt any standard it chooses. With their level of advancement in science and technology, developed countries may never fail to provide the required justifications. Taking advantage of the 'equivalence' clause under SPS, developed countries also tend to limit market access for LDCs and developing countries' products. This was evident from the Bangladeshi shrimp case. The shrimp shipments that were bound to EU were diverted to the USA and Japan after the EU's ban. The acceptance of banned Bangladeshi shrimps in USA and Japan suggests that EU had set very high SPS standard for Bangladeshi shrimps.

Shrimp export in Bangladesh is critical element of trade. In 1997, the EU imposed ban on import of Bangladesh shrimps

on the ground that Bangladeshi shrimps did not meet the EU's HACCP. The EU based their ban on issues of "health safeguards, quality control, infrastructure and hygiene in the processing units" and their "lack of controlling measures" carried out by Bangladeshi authorities. This trade blockage was a serious blow to the Bangladeshi economy in general and fisheries in particular. Similarly, Nepal's honey export was denied by Norway for not meeting their standards. The two countries have suffered millions of dollars due to these bans.

Bhutan will suffer a similar fate if such issues surface after joining the WTO. The country will also face a serious challenge in meeting technological, technical and financial requirements for maintaining SPS quality control infrastructures and programmes, if the US\$ 2.4 million annual cost of maintaining HACCP programme in Bangladesh is any indication. Bhutan will also not be in a position to set independent SPS standards like most of the LDCs, and as such may have to accept the international standard. Since the international standards are very high, domestic producers will suffer as the same standard should also be applied to domestic products under the WTO national treatment clause. If the standards are fixed low to keep the domestic production going, Bhutan will not be able to control imports. This will make Bhutan a dumping ground for sub-standard products. The uncontrolled imports, which otherwise would have been controlled by applying SPS standard, will increase trade BoP. The cheap availability of products through uncontrolled imports will also risk the elimination of domestic products from the market and undermine the livelihoods of many Bhutanese people.

Anti-dumping Measures (ADMs)

Before explaining ADMs, let us look at the definition of dumping. In economics, dumping refers to any kind of predatory pricing policy that is intended to capture the market share for long-term interests. According to Peacock (2004), dumping is the "exporting of produce at less than

production cost to the material detriment of competitor industries in the importing countries.”

Dumping is caused by overproduction, a desire to dominate foreign markets, the subsidisation of export commodity in question and exchange rate manipulation. This creates an uneven playing field in the market. The remedial action taken by the importing country to re-level the playing field is called the ADMs. The importing countries can resort to ADMs like import bans, duty orders, quotas and subsidies in order to legitimately protect their domestic industry. However, in practice, ADMs are used arbitrarily to protect inefficient domestic industries.

It is also evident that ADMs are simply destructive and often economically and socially damaging for the developing countries and LDCs. ADMs seem to be targeted at competitive export-oriented commodities and as such the impact on the economy and society can be very high. There is also the danger that producers in rich and powerful countries, who have higher financial ability to bear the cost of litigation, may be encouraged to initiate litigation as the financial penalty levied on defaulters goes to the plaintiff - instead of country's treasury. On the other hand, producers in developing countries and LDCs may have to drop the litigation even if they are truly aggrieved, because of the huge financial requirements.

Dispute Settlement Understanding (DSU)

The Dispute Settlement system consists of a set of agreed rules and procedures that will provide member countries with the means to settle any trade related disputes. It is like a court of law in civil society. It provides legal protection to an aggrieved member country in the event of violation of any agreed WTO rules governing the trade. However, it was observed that dispute settlement mechanisms are rarely used by developing countries and not at all by LDCs, so far. The reasons cited were the enormous financial requirements needed for litigation; the small stakes due to small economy

and trade, the lengthy process and fear of economic and political implications, such as trade preferences and foreign aid.

Various constraints that Bhutan face such as legal human resources and prohibitive litigation cost will make it very difficult for taking the trade disputes to the WTO. The minimum time taken to settle a case at the WTO dispute settlement body (DSB) is estimated to be about 15 months, without including the implementation phase. For a small country like Bhutan, the economy will be completely paralysed, if any remedial measures to be taken have to wait for such a long time.

Bhutan may have to hire legal counsel to take up trade related cases in the future. The fee charged by law firms is estimated to be between US\$ 500 to US\$ 1000 excluding travel and accommodation expenses (Nordstrom, 2005). The same study estimates the minimum litigation costs as US\$ 128,500 for simple cases and the maximum cost at US\$ 706,000. Therefore, Bhutan may not be able to file any cases at the WTO considering the requirement of huge financial outlay. Bhutan can not completely avoid incurring expenses on trade related litigations because the country can choose not to file any cases but will not have option not to attend the DSB if other countries files cases against Bhutan.

Bhutan will also be discouraged to take up litigation because of the fear of economic and political repercussions as the Bhutanese economy is largely a donor driven economy. As such, Bhutan may not have any benefits from DSU like other LDCs. No LDCs have fought any case at the WTO dispute settlement court so far, except Bangladesh. This indicates two things—either LDCs were not too aggrieved or they do not have the ability to take up litigation due to high litigation costs. See annexure 2 for the number of cases filed at the DSB by the WTO member countries. The dispute case record since 1995, till 4 February 2010 shows that 40.4% of complaints were filed by the United States and the European

Communities. They also appeared as defendants in 43.5% of cases.

Table 7: WTO Disputes: Leading complainants and respondents (10 January 1995-4 February 2010)

Country	as complainant (No. of cases)	as respondent (No. of cases)
United States	94	109
EU	81	67
Canada	33	15
Brazil	24	14
Mexico	21	14
India	18	20
Argentina	15	16
Korea	14	14
Japan	13	15
Thailand	13	3
Chile	10	13
Australia	7	10
China	7	17
Guatemala	7	2

Source: www.wto.org; date accessed 03/03/2010.

Table 8 shows the use of DSB by development status. The categorisation of development status into 'Developed', 'Developing' and 'LDCs' by United Nations (UN) is used here. Of the total of 58 countries that were had used DSB either as a complainant or defendant so far, 23 countries are developed, 34 developing economies and one LDC. Refer annexure 8 for list of WTO member countries who had used DSB either as complainant or respondents as far.

Table 8: Use of DSB by development status

Dev. Status	As Complainant		As Respondent	
	No. of cases	Percent	No. of cases	Percent
Developed	253	58.4	240	59.3
DC	179	41.3	165	40.7
LDC	1	0.2	0	0.0
Total	433	100	405	100

Source: www.wto.org; date accessed 03/03/2010.

Conclusions

Most countries that have joined the WTO up until now seem mostly to have been forced by economic circumstances i.e., in search of markets for their products. As Bhutan lacks export enhancing conditions such as economies of scale, efficient transportation infrastructure, a strong industrial base and a limited number of export potential commodities, global market access will not be of any substantial benefit to Bhutan.

If Bhutan joins the WTO, the kingdom will need to spend huge resources on obliging the WTO rules and regulations without any corresponding concrete benefit. If no help is forthcoming from advanced countries, Bhutan's economic development would be seriously hampered as precious funds will have to be diverted to fulfilling the WTO requirements.

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Overall Summary of the Positive List Offers

Market Access in Goods (Agriculture) and Market Access in Goods (Non-agriculture) (Excel Sheet)

Annexure

Annexure 1: Comparative tariff rates of few selected countries

Country	Accession year	Summary	Total (%)	Deviation from Bhutan	Ag (%)	Deviation from Bhutan	Non-Ag (%)	Deviation from Bhutan
U.S	1995	Simple average final bound	3.5	-25.9	4.8	-43.9	3.3	-23.1
		Simple average MFN applied (2008)	3.5	-18.4	5.3	-36.1	3.3	-15.6
		Binding coverage	100	0			100	0
Japan	1995	Simple average final bound	5.4	-24	24	-24.7	2.5	-23.9
		Simple average MFN applied (2008)	5.4	-16.5	23.6	-17.8	2.6	-16.3
		Binding coverage	99.6	-0.4			99.6	-0.4

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Canada	1995	Simple average final bound	6.5	-22.9	14.5	-34.2	5.3	-21.1
		Simple average MFN applied (2008)	4.7	-17.2	11.5	-29.9	3.7	-15.2
		Binding coverage	99.7	-0.3			99.7	-0.3
Maldives	1995	Simple average final bound	36.9	7.5	48.2	-0.5	35.1	8.7
		Simple average MFN applied (2008)	20.4	-1.5	18.3	-23.1	20.7	1.8
		Binding coverage	97.1	-2.9			96.7	-3.3
Mongolia	1997	Simple average final bound	17.6	-11.8	18.9	-29.8	17.3	-9.1
		Simple average MFN applied	5	-16.9	5.1	-36.3	5	-13.9

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		(2008)						
		Binding coverage	100	0			100	0
Nepal	2004	Simple average final bound	26	-3.4	41.5	-7.2	23.7	-2.7
		Simple average MFN applied (2008)	12.7	-9.2	14.8	-26.6	12.4	-6.5
		Binding coverage	99.4	-0.6			99.3	-0.7
China	2001	Simple average final bound	10	-19.4	15.8	-32.9	9.1	-17.3
		Simple average MFN applied (2008)	9.6	-12.3	15.6	-25.8	8.7	-10.2
		Binding coverage	100	0			100	0
India	1995	Simple average final bound	49	19.6	114.2	65.5	34.7	8.3

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		Simple average MFN applied (2008)	13	-8.9	32.2	-9.2	10.1	-8.8
		Binding coverage	73.8	-26.2			69.8	-30.2
Vietnam	2007	Simple average final bound	11.4	-18	18.5	-30.2	10.4	-16
		Simple average MFN applied (2007)	16.8	-5.1	24.2	-17.2	15.7	-3.2
		Binding coverage	100	0			100	0
Philippines	1995	Simple average final bound	25.6	-3.8	34.7	-14	23.4	-3
		Simple average MFN applied (2008)	6.3	-15.6	9.7	-31.7	5.7	-13.2
		Binding	66.8	-33.2			61.8	-38.2

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		coverage						
Bangladesh	1995	Simple average final bound	169.2	139.8	192	143.3	34.4	8
		Simple average MFN applied (2008)	14.8	-7.1	17.6	-23.8	14.3	-4.6
		Binding coverage	15.5	-84.5			2.6	-97.4
Bhutan	--	Simple average final bound*	29.4		48.7		26.4	
		Simple average MFN applied (2008)**	21.9		41.4		18.9	
		Binding coverage	100				100	

Sources: WTO, "World Tariff Profiles 2009"

* Simple average final bound rates from WTO accession documents, Ministry of Economic Affairs.

** Simple average MFN applied is from World Tariff Profiles 2009.

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Annexure 2: Top 25 imports (2008)

BTC Code	Commodity	Total (Nu.)
2710.19.30	Other light oils and preparations (HSD)	1,807,657,542
2710.11.10	Motor spirit (gasoline) including aviation spirit (Petrol)	703,350,307
1006.30.00	Semi-milled or wholly milled rice, whether or not polished or glazed	693,100,873
8703.33.00	Of a cylinder capacity exceeding 2,500 cc	680,986,344
7203.10.00	Ferrous products obtained by direct reduction of iron ore	678,946,960
8703.22.00	Of a cylinder capacity exceeding 1,000 cc but not exceeding 1,500 cc	558,877,024
2602.00.00	Manganese ores and concentrates, including ferruginous manganese ores and concentrates with a manganese content of 20% or more, calculated on the dry weight.	555,451,119
2704.00.10	Coke and semi-coke	480,051,551
1511.10.20	Crude Palmolein	453,766,320
4402.90.00	Others (Wood charcoal)	430,999,093
7204.10.00	Waste and scrap of cast iron	382,737,653
2713.20.00	Petroleum bitumen	381,019,307
8429.52.00	Machinery with a 360o revolving superstructure	363,095,349
7408.11.00	Of which the maximum cross-sectional dimension exceeds 6 mm (Copper wire)	359,606,473
7222.40.00	Angles, shapes and sections	310,524,571
8517.62.00	Machines for the reception, conversion and transmission or regeneration of voice,	288,483,307

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	images or other data, including switching and routing apparatus	
5402.46.00	Other, of polyesters, partially oriented	288,118,492
1507.90.00	Others (Soybean oil and its fractions, whether or not refined, but not chemically modified.)	273,033,840
7210.41.00	Corrugated	248,137,262
0402.10.00	In powder, granules or other solid forms, of a fat content, by weight, not exceeding 1.5%	233,479,635
2203.00.00	Beer made from malt.	212,078,373
8432.29.10	Power tillers	198,711,583
2701.19.00	Other coal	183,571,474
3901.20.00	Polyethylene having a specific gravity of 0.94 or more	182,994,203
8703.21.00	Of a cylinder capacity not exceeding 1,000 cc	179,845,609

Source: DRC, "Bhutan Trade Statistics 2008"

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Annexure 3: Top 25 imports from India (2008)

BTC Code	Commodity	From India (Nu.)	Total (Nu.)
2710.19.30	Other light oils and preparations (HSD)	1,807,657,542	1,807,657,542
2710.11.10	Motor spirit (gasoline) including aviation spirit (Petrol)	703,350,307	703,350,307
1006.30.00	Semi-milled or wholly milled rice, whether or not polished or glazed	692,778,500	693,100,873
7203.10.00	Ferrous products obtained by direct reduction of iron ore	678,946,960	678,946,960
2602.00.00	Manganese ores and concentrates, including ferruginous manganese ores and concentrates with a manganese content of 20% or more, calculated on the dry weight.	555,451,119	555,451,119
8703.22.00	Of a cylinder capacity exceeding 1,000 cc but not exceeding 1,500 cc	537,652,748	558,877,024
2704.00.10	Coke and semi-coke	480,051,551	480,051,551
4402.90.00	Others (Wood charcoal)	430,999,093	430,999,093
7204.10.00	Waste and scrap of cast iron	382,737,653	382,737,653
2713.20.00	Petroleum bitumen	363,850,840	381,019,307
1507.90.00	Others (Soybean oil and its fractions, whether or not refined, but not chemically modified.)	273,003,964	273,033,840
7210.41.00	Corrugated	242,825,359	248,137,262
0402.10.00	In powder, granules or other solid forms, of a fat content, by weight, not exceeding 1.5%	232,987,751	233,479,635

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2203.00.00	Beer made from malt.	207,148,737	212,078,373
2701.19.00	Other coal	183,571,474	183,571,474
8703.21.00	Of a cylinder capacity not exceeding 1,000 cc	177,200,856	179,845,609
8704.10.00	Dumpers designed for off-highway use	158,247,793	158,247,793
0201.10.00	Carcasses and half-carcasses	139,220,445	139,293,398
8703.33.00	Of a cylinder capacity exceeding 2,500 cc	135,983,341	680,986,344
7204.30.00	Waste and scrap of tinned iron or steel	126,550,951	126,550,951
2710.19.70	Lubricating oils	124,862,791	129,119,302
7308.10.00	Bridges and bridge-sections	122,593,560	122,599,112
2711.12.00	Propane(LPG)	114,821,523	114,821,523
1701.11.00	Cane sugar	112,655,745	112,682,795
7308.90.00	Others (Structures (excluding pre-fabricated buildings of heading No. ...))	107,106,093	107,843,129

Source: Department of Revenue and Customs: Bhutan Trade Statistics 2008.

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Annexure 4: Top 25 imports from COTI (2008)

BTC Code	Commodity	From COTI (Nu.)	Total (Nu.)
8703.33.00	Of a cylinder capacity exceeding 2,500 cc	545,003,003	680,986,344
1511.10.20	Crude Palmolein	453,766,320	453,766,320
7408.11.00	Of which the maximum cross-sectional dimension exceeds 6 mm	359,518,063	359,606,473
8429.52.00	Machinery with a 360o revolving superstructure	356,625,180	363,095,349
7222.40.00	Angles, shapes and sections	307,908,933	310,524,571
5402.46.00	Other, of polyesters, partially oriented	288,118,492	288,118,492
8517.62.00	Machines for the reception, conversion and transmission or regeneration of voice, images or other data, including switching and routing apparatus	281,811,388	288,483,307
8432.29.10	Power tillers	198,476,083	198,711,583
3901.20.00	Polyethylene having a specific gravity of 0.94 or more	172,940,203	182,994,203
8471.50.00	Processing units other than those of subheading 8471.41 or 8471.49, whether or not containing in the same housing one or two of the following types of unit; storage units; input units, output units	142,985,249	166,665,007
4907.00.00	Unused postage, revenue or similar stamps of current or new issue in the country to which they are destined; stamps-impressed paper; banknotes; cheque forms; stock, share or bond certificates and similar documents of title.	121,109,754	123,959,042

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8702.10.00	With compression-ignition internal combustion piston engine (diesel or semi-diesel)	109,108,924	134,501,884
8406.81.00	Of an output exceeding 40 MW	106,715,045	106,715,045
9018.19.00	Others (Instruments and appliances used in medical, surgical, dental or veterinary science, including scintigraphic apparatus, other electro-medical apparatus and sight-testing instruments.	93,109,540	114,780,281
3902.10.00	Polypropylene	90,199,468	90,199,468
8703.32.00	Of a cylinder capacity exceeding 1,500 cc but not exceeding 2,500 cc	82,973,142	94,194,047
2515.11.10	Crude marble	70,934,761	71,008,065
3801.30.00	Arbonaceous pastes for electrodes and similar pastes for furnace linings	59,338,033	146,373,260
2208.30.00	Whiskies	59,078,959	63,924,024
8431.39.00	Others (Parts suitable for use solely or principally with machinery of headings No. 84.25 to 84.30.)	56,220,846	64,008,671
8803.30.00	Other parts of aeroplanes or helicopters	52,136,258	52,136,258
8517.61.00	Base station	50,568,784	50,612,784
7118.90.00	Others (Coin.)	47,558,812	47,558,812
8516.60.00	Other ovens; cookers, cooking plates, boiling rings, grillers and roasters	47,183,214	49,169,296
8525.50.00	Transmission apparatus	44,856,627	45,147,197

Source: Department of Revenue and Customs: Bhutan Trade Statistics 2008.

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Annexure 5. Top 25 exports (2008)

Code	Commodity	Total (Nu.)
2716.00.00	Electrical Energy	11,032,590,000
7202.21.00	Containing by weight more than 55% of silicon (Ferro-silicon)	2,811,567,186
2849.10.00	Of calcium (Carbides)	852,565,765
7408.19.00	Other (copper wire)	769,474,576
8111.00.00	Manganese and articles thereof, including waste and scrap.	619,785,900
2523.29.30	Portland pozzolana cement	596,023,598
1516.20.00	Vegetable fats and oils and their fractions	527,202,596
2523.29.10	Ordinary portland cement	456,165,594
7214.30.00	Other, of free-cutting steel	400,334,348
7207.19.00	Others (Semifinished products of iron or non-alloy steel.)	350,889,888
7206.10.00	Ingots	319,723,194
2520.10.00	Gypsum; anhydrite	308,602,553
4410.11.00	Particle board	268,161,797
0805.10.00	Oranges	246,368,529
2518.10.20	Dolomite, not calcined or sintered, Chips	239,065,681
2701.12.00	Bituminous coal	182,725,768
2518.10.10	Dolomite, not calcined or sintered, powdered	164,514,642

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3920.99.00	Of other plastics	161,919,350
5403.49.00	Other	157,010,558
2523.29.40	Portland slag cement	154,048,525
2009.90.00	Mixtures of juices	144,323,792
2521.00.90	Limestone and other calcareous stone	133,110,037
0701.90.00	Other/Potatoes, fresh or chilled.	119,716,286
0712.39.10	Cordyceps sinensis (<i>Yertsha gein bhup</i>)	117,831,618
5402.33.00	Of polyesters	112,548,778

Source: Department of Revenue and Customs: Bhutan Trade Statistics 2008.

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Annexure 6: Top 25 exports to India (2008)

Code	Commodity	Value in Nu.
2716.00.00	Electrical Energy	11,032,590,000
7202.21.00	Containing by weight more than 55% of silicon	2,720,434,227
2849.10.00	Of calcium	852,565,765
7408.19.00	Other	769,474,576
8111.00.00	Manganese and articles thereof, including waste and scrap.	619,785,900
2523.29.30	Portland pozzolana cement	594,109,598
1516.20.00	Vegetable fats and oils and their fractions	527,202,596
2523.29.10	Ordinary portland cement	455,882,094
7214.30.00	Other, of free-cutting steel	400,334,348
7206.10.00	Ingots	298,787,054
2520.10.00	Gypsum; anhydrite	287,371,513
4410.11.00	Particle board	268,161,797
2518.10.20	Dolomite, not calcined or sintered, Chips	234,940,942
7207.19.00	Other	191,487,428
2701.12.00	Bituminous coal	164,538,036
3920.99.00	Of other plastics	161,919,350
5403.49.00	Other	157,010,558

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2523.29.40	Portland slag cement	154,048,525
2009.90.00	Mixtures of juices	142,108,122
0701.90.00	Other	119,716,176
5402.33.00	Of polyesters	112,548,778
6802.21.00	Marble, travertine and alabaster	104,667,209
7213.20.00	Other, of free-cutting steel	89,260,167
2518.10.30	Dolomite, not calcined or sintered, Lumbs and slabs	80,341,106
2518.10.10	Dolomite, not calcined or sintered, powdered	77,078,680

Source: Department of Revenue and Customs: Bhutan Trade Statistics 2008.

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Annexure 7: Top 25 exports to COTI (2008)

BTC Code	Commodity	Value in Nu.
0805.10.00	Oranges	226,484,864
7207.19.00	Others (Semifinished products of iron or non-alloy steel.)	159,402,460
2521.00.90	Limestone and other calcareous stone	125,324,881
0712.39.10	Cordyceps sinensis (Yertsha gein bhup)	117,831,618
7202.21.00	Containing by weight more than 55% of silicon	91,132,959
2518.10.10	Dolomite, not calcined or sintered, powdered	87,435,962
0908.30.00	Cardamoms	76,043,000
0808.10.00	Apples	24,858,325
2518.10.30	Dolomite, not calcined or sintered, Lumbs and slabs	23,382,107
2520.10.00	Gypsum; anhydrite	21,231,040
7206.10.00	Ingots	20,936,140
2701.12.00	Bituminous coal	18,187,732
2526.20.00	Crushed or powdered	13,841,644
7114.11.40	Dopchus	12,989,576
2526.10.00	Not crushed, not powdered	12,903,809
7213.20.00	Other, of free-cutting steel	10,267,160
7113.19.00	Of other precious metal, whether or not plated or clad with precious	8,114,080

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	metal	
1006.20.20	Red rice (Yeechum)	7,052,291
0709.59.10	Matsutake (Sangay Shamu)	4,536,086
7113.11.00	Of silver, whether or not plated or clad with other precious metal	4,412,000
4421.90.90	Others (Other articles of wood.)	4,177,757
2518.10.20	Dolomite, not calcined or sintered, Chips	4,124,739
2506.20.00	Quartzite	3,969,069
2003.10.00	Mushrooms of the genus Agaricus	2,877,140
7114.11.30	Sechus	2,392,000

Source: Department of Revenue and Customs: Bhutan Trade Statistics 2008.

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Annexure 8: *Number of cases by countries (10 January 1995-4 February 2010)*

Country	As complainant (No. of cases)	As respondent (No. of cases)
United States	94	109
European Communities	81	67
Canada	33	15
Brazil	24	14
Mexico	21	14
India	18	20
Argentina	15	16
Korea	14	14
Japan	13	15
Thailand	13	3
Chile	10	13
Australia	7	10
China	7	17
Guatemala	7	2
New Zealand	7	0
Honduras	6	0

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Colombia	5	3
Hungary	5	2
Panama	5	1
Philippines	5	6
Costa Rica	4	0
Indonesia	4	4
Norway	4	0
Switzerland	4	—
Ecuador	3	3
Pakistan	3	2
Poland	3	1
Taiwan, Penghu, Kinmen and Matsu, Separate Customs Territory of	3	0
Peru	2	4
Turkey	2	8
Antigua and Barbuda	1	0
Bangladesh	1	0
Czech Republic	1	2
Hong Kong, China	1	0
Malaysia	1	1

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Nicaragua	1	2
Singapore	1	0
Sri Lanka	1	0
Uruguay	1	1
Venezuela	1	2
Viet Nam	1	0
Belgium	0	3
Croatia	0	1
Denmark	0	1
Dominican Republic	0	3
Egypt	0	4
European Union	0	1
France	0	2
Greece	0	2
Ireland	0	3
Netherlands	0	1
Portugal	0	1
Romania	0	2
Slovak Republic	0	3

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South Africa	0	3
Sweden	0	1
Trinidad and Tobago	0	2
United Kingdom	0	1
Total cases	433	405

Source: www.wto.org; date accessed 03/03/2010.

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Annexure 9: List of Laws and Regulations needed for enactment or amendment for the WTO Accession

No.	Laws/ Regulations	WTO Agreement
I.	LEGISLATIVE WORK INCLUDED IN THE SECTORAL LAPS Agreement on Customs Valuation	
1.	Amendments to the Rules on the Sales Tax, Customs and Excise Act of the Kingdom of Bhutan 2000	Agreement on Customs Valuation
2.	Revision of the Customs Manual	Agreement on Customs Valuation
II.	Agreement on Trade Related Aspects of Intellectual Property Rights (TRIPS)	
3.	Copy Right Act, 2001 (Amendment)	TRIPS
4.	The Hague Agreement Concerning the International Deposit of Industrial Designs	TRIPS
5.	Patent Cooperation Treaty	TRIPS
6.	Industrial Property Act (Amendment)	TRIPS
7.	Develop implementing rules, guidelines, work procedures and manuals on Geographical Indications, Trade Secrets and Integrated Circuits	TRIPS
8.	Develop implementing rules, guidelines, work procedures and manuals on Trademarks, Design and Patent	TRIPS
9.	Regulation on collective Administration of Copyrights and related Rights	TRIPS
10.	The Nice Agreement Concerning the International Classification of Goods and Services for the Purposes of the Registration of Marks	TRIPS
11.	The Strasbourg Agreement Concerning the International Patent Classification	TRIPS

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12.	The Rome Convention for the Protection of Performers, Producers of Programs and Broadcasting Organizations	TRIPS
III.	Agreement on Technical Barriers to Trade (TBT)	
13.	Develop procedures for recognition of equivalent technical regulations	TBT
14.	Develop procedures for recognition of conformity assessment	TBT
15.	Develop procedures for sampling, verification, testing, inspection and evaluation of conformity assessment	TBT
16.	National Standards Act with a wide coverage on TBT issues	TBT
IV.	Agreement on the Application of Sanitary and Phytosanitary Measures (SPS)	
17.	Seed Act Rules	SPS and Agreement on Agriculture
18.	Livestock Act Rules	SPS and Agreement on Agriculture
19.	Pesticides Act Rules	SPS and Agreement on Agriculture
20.	Food Act of Bhutan	SPS and Agreement on Agriculture
21.	Food Act Rules	SPS and Agreement on Agriculture
	LEGISLATIVE WORK NOT INCLUDED IN THE SECTORAL LAPS	
V.	Other Trade-Related Laws and Regulations	
22.	Bhutan Medicines Act Regulation	General

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23.	Bhutan Information, Communications and Media Act	GATS
24.	Labour and Employment Act	GATS
25.	Financial Services Act	GATS
26.	Foreign Exchange Regulations (Amendment)	<i>General</i>
27.	The Royal Monetary Authority of Bhutan Act (Amendment)	General
28.	Foreign Exchange Regulations, Rules and Procedures	GATS
29.	Contract Act	GATT/GATS
30.	Enterprise Registration Act	GATT/GATS
31.	Electricity Act Regulation	General
32.	Converged Bhutan Information, Communications and Media Regulations and Rules	GATS
33.	National Environment Protection Act	General
34.	Consumer Protection Act	General
35.	Industries and Investment Act	GATT/GATS

Annexure 10: Comparison of retail prices of Bhutanese rice and imported rice in Thimphu

Imported Rice	Price (Nu.)	Quantity	Price/KG (Nu.)*
Basmati1	580	20	29.0
Basmati2	620	20	31.0

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Basmati3	650	20	32.5
Diamond1	430	25	17.2
Diamond2	450	25	18.0
Gold coin	490	25	19.6
S.T Gold	500	25	20.0
Bondi	1260	25	50.4
Queen rice	1000	25	40.0
Miss rice	670	25	26.8
Rice 551	840	50	16.8
Super fine	840	50	16.8
Average price (Nu. per Kg)			26.5
Bhutanese Rice	Price	Qty	Price/KG (in Nu.)**
Red Rice	-	-	44.7
White Rice	-	-	47.9
Average price (Nu. per Kg)			46.3

Source: *FCB Agent, Chubachu, Thimphu. Telephonic enquiry on 26.03.2010

** Ministry of Agriculture, Thimphu, Bhutan. “Monthly Arrival of vegetables and Average Prices at the Centenary Farmers' Market” Available at <http://www.moa.gov.bt/moa/downloads/downloadFiles/MoADownload9or5154nn.xls> Accessed 26.03.2010

In with the Bad: Ambient Air Quality and Tranboundary Pollution in Bhutan

*Linda Pannozzo**

The transition is both immediate and inescapable. As you cross the border from the dusty, chaotic sprawl of Darranga, India into Bhutan both the pace and the landscape change abruptly. The flat plains of Assam give rise to the rugged and verdant sub-tropical evergreen jungles of Samdrup Jongkhar, a dzongkhag situated at the far southeastern part of the country. More than four fifths of the district is covered in forest and the land is as much a home to a vast array of flora and fauna as it is to the 36,000 people who live there. By comparison the state of Assam teams with a population of more than 27 million—38 times the entire population of Bhutan—340 people per square kilometer compared to Bhutan's average of 17.¹

Thus, in a span of a short space and time—passing under the dragon and garuda of the border gate—one defining reality becomes crystal clear: Bhutan is extraordinary and unique, but also incredibly vulnerable. In fact, it has fallen victim to some of the worst consequences of industrialization-gone-mad in the rest of the world. For one, although its contribution to the global climate crisis is negligible at best, Bhutan is considered to be highly vulnerable to its effects — both in terms of human health impacts and in terms of weather-related disasters. One recent newspaper article revealed that climate change is already causing extreme rainfall in Bhutan, nearly doubling from an average of 644

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¹ Population figures for Assam state are for 2001. Population estimate for 2011 is 30 million.

mm in 2000 to 1,120mm in 2010.² Further reports indicate that the entire Himalayan region is perhaps the world's most vulnerable to climate change. "As the climate warms, the river flows will at first increase, causing devastating summer floods, and then, as the glaciers that supply them shrink, the rivers will dwindle."³

According to Bhutan's National Environment Commission (NEC), the Bhutan Himalayas is known to have 677 glaciers and 2,674 glacial lakes—25 of which are potentially dangerous. These glaciers are reportedly retreating at an alarming rate—some by 20-30 metres per year. This could mean increased water flow in the short-term (including outburst floods), but diminished flow in the long term, posing serious implications on hydro-power generation as well as agriculture and drinking water supply.⁴

But the burning of fossil fuels isn't just contributing to climate chaos, it's also having an impact on the air.

For 5 months, from November 2010 to March 2011, I had the privilege of working with the Samdrup Jongkhar Initiative (SJI), a civil-society based initiative, which aims to raise living standards and self-reliance in the dzongkhag. Field research brought me to many villages in that dzongkhag where over and over farmers described the challenges they faced in achieving food security and finding markets that worked for them. They also spoke of how the climate and rainfall amounts were changing and how productivity in their fields was declining.

² Dawa T. Wangchuk. "Extreme rainfall caused by climate change." *Business Bhutan*. March 12, 2011.

³ Cribb, Julian. 2010. *The Coming Famine. The Global Food Crisis and What We Can do to Avoid it*. University of California Press. Berkeley, pp. 142-143.

⁴ National Environment Commission. 2008. *Bhutan Environment Outlook*. National Environment Commission Secretariat, Royal Government of Bhutan, pp. 36-42.

During that time, the research team was stationed in the town of Dewathang, located approximately 18 km from the steamy border with India, at an elevation of 850 metres.



On a clear sky day, one could see beyond the glorious rolling foothills to the plains of Assam and its patchwork quilt of fields. But clear days were few and far between. Most of the time a haze obscured the sun and reduced visibility. At first we thought it was fog, or the result of a forest fire. But as the days became weeks it became apparent that what we were witnessing was much more sinister. Here, in arguably one of the most pristine countries on earth, we were engulfed in air pollution. What had become obvious to us was not as obvious to the Bhutanese around us, who seemed to have adjusted to the significant change in air quality perhaps because it had occurred gradually, over a long period of time.

The image displayed below was taken in February 2006, by NASA's Aqua satellite. It shows this pale band of haze—covering northern India, just south of the Himalaya. Haze

also intrudes into the skies of southern Nepal, Bhutan, and Bangladesh.⁵ This is the haze we looked out into daily.

Studies indicate that what has been alternately called the “brown cloud,” the “Asian brown cloud,” or the “Atmospheric brown cloud,” (ABC) is worse during the winter months (November until April) when there is less rain to wash the pollution from the air and it is thought to be caused by a wide range of anthropogenic sources: coal-fueled power plants in India and China, airborne particles from combustion such as wood fires and forest fires, vehicle emissions, and factories, and the burning of biomass to generate energy.

Extensive epidemiologic and toxicologic evidence in the last two decades has established a strong correlation between air pollution and many health ailments. Statistics show that more people die and are admitted to hospital for heart and lung problems on days with elevated levels of air pollution, and that people do not live as long in cities with high levels of air pollution. If air pollution increases susceptibility to sickness, as the evidence clearly indicates, then it also contributes to the social and monetary cost of caring for those affected, and it correspondingly diminishes individual quality of life. Apart from the direct physical damage to health, the environment, and materials caused by air pollution, the available evidence also points to known less tangible pollution-induced economic costs related to lost productivity, diminishing availability of natural resources, and social disruption, which must also be taken into account when assessing the overall effect of air pollution on human society and on the planet.

Studies relating to the “brown cloud” indicate alarming health consequences including bronchitis, pulmonary edema,

⁵ Scripps Institution of Oceanography:
http://scrippsnews.ucsd.edu/pressreleases/images/india_web.jpg.
Image courtesy Jeff Schmaltz, Moderate Resolution Imaging Spectroradiometer Land Rapid Response Team at the NASA Goddard Space Flight Center.

chronic bronchitis, emphysema, cancer, asphyxiation and even death in cases of high doses. Most commonly observed effects at lower doses are eye, nose and throat irritation.⁶

One major 2002 UNEP study—the first time the ABC was assessed for impacts on climate, agriculture, and health—found that nearly 2 million people die each year in India alone from conditions related to the atmospheric air pollution.⁷

According to a 2008 report by Bhutan's National Environment Commission (NEC), the occurrence of respiratory diseases in Bhutan is also very high. During the period 2003-2006, there were more than 1 million respiratory disease-related referral cases and 436 deaths due to respiratory problems—accounting for 20% of deaths caused by all diseases. NEC points out, that despite this high rate of respiratory illness, there is currently no national study assessing the correlation between air pollution and the occurrence of respiratory disease.⁸

In addition to the untold health effects the transboundary air pollution may be having on the Bhutanese population, research is now indicating that the pollution-laden clouds could also be adversely affecting agricultural productivity and rice production in particular. The 2002 UNEP study reported that the haze, which covers roughly 10 million square kilometers, can result in up to 30% reduction in direct solar radiation, causing declines in agricultural productivity.⁹ The

⁶ United Nations Environment Programme. 2002. Asian Brown Cloud: Climate and Other Environmental Impacts Study. UNEP. Available from <http://www.rrcap.unep.org/issues/air/impactstudy/Executive%20Summary.pdf>. p. 42.

⁷ Ibid. Health effects and morbidity figures cited in *The Lancet*. Pollution cloud over south Asia is increasing ill health. Volume 360, Issue 9332. August, 2002. Available online.

⁸ NEC, 2008, p. 50.

⁹ UNEP, 2002, p. 38.

study also reports that the haze suppresses rain, and can settle on plants as dust, soot, and fly ash, further shielding plant leaves from solar radiation. Another major direct impact is acid rain.¹⁰

A 2006 news report echoed some of these findings. One U.S. study found that the brown clouds, which cloak much of South Asia, have a negative impact on rice output by reducing sunlight and rainfall. The report also noted that elevated levels of greenhouse gas emissions contributed to reduced yields.¹¹ Using climate models and historical data on Indian rice harvests, the researchers found that if there had been no atmospheric brown clouds between 1985 and 1998, the annual rice harvest would have been 11% higher than it was. The team concluded that the brown clouds reduced agricultural productivity. The study also noted that the effect of the brown clouds would be greater on areas that used rain to water their crops and that the effect would be less pronounced where irrigation was used.

At the time of writing, ambient air quality for Bhutan were very limited. Data for the Samdrup Jongkhar dzongkhag were not available and according to the NEC *regular* air quality monitoring had only been done to date in Thimphu.¹²

In 2004 the NEC reported that air pollution was an “emerging issue, especially in urban areas,” due to the growth of the industrial sector—by 216% over a 5-year period (1997-2002)—and the rapid increase in the number of vehicles on the road—more than doubling from 11,800 to more than 25,000 between 1997 and 2003.¹³ According to a presentation by the United Nations Centre for Regional Development

¹⁰ Ibid.

¹¹ British Broadcasting Corporation (BBC News). Pollution Reducing Rice Harvest. December 5, 2006. Available online.

¹² NEC, 2008, p. 49.

¹³ National Environment Commission. 2004. Brief Report on State of the Environment. Royal Government of Bhutan, Thimphu, pp. 6-7.

(UNCRD), private vehicle ownership in Bhutan increased threefold in the ten-year period between 1997 and 2007, with the biggest increase in light vehicles. According to the UNCRD, 43% of all vehicles are personal cars, which is causing troubles in urban areas where they are competing with urban transport systems, making them less economically viable.

Despite this recent trend in vehicle ownership and industrialization, air quality data from 2004 to 2007 for Thimphu indicate that particulate matter concentrations were still below allowable limits set by the United States Environmental Protection Agency and the European Union's guideline.¹⁴ Data from the 4-year period also showed that concentrations of oxides of sulphur and nitrogen were below detectable levels. However, in the dry winter months, air quality in Thimphu was found to be worse, with higher concentrations of particulate matter. This was attributed to emission from source points, the constant winter high pressure system that sits over the South Asian region and temperature inversions during dry winter seasons.¹⁵ The NEC attributed the sources of air pollution in the capital to combustion of biomass, combustion of fossil fuels from vehicular emissions, industries and fugitive dusts from unpaved roads and new construction sites. Heating bitumen along road construction sites and burning of waste were also contributing to urban air pollution.¹⁶

However, the NEC report goes on to make a statement that may not be applicable to all of Bhutan, especially given the presence of the "atmospheric brown cloud":

¹⁴ Average PM₁₀ concentration in Thimphu between June 2004-May 2007 was 20 ug/m³. US-EPA limit is 50 ug/m³ and EU guideline has set it at 40 ug/m³. Ibid.

¹⁵ Ibid. p. 8.

¹⁶ Ibid.

On the basis of analysis of ambient quality data for Thimphu, it can be said that ambient air quality in most other places will be even more pristine because of smaller population, fewer vehicles, and less industrial activities.¹⁷

At the same time, transboundary pollution is recognized by the NEC as a concern. In its most recent 2008 report *Environment Outlook* it notes that in 1998 South Asian countries, including Bhutan, were party to a declaration on trans-boundary pollution focusing on the need for all signatories to initiate studies and programmes on air pollution.¹⁸

A transboundary air pollution monitoring station has been established at Gelephu and NEC reports that there are plans to set up additional pollution monitoring stations in “strategic locations around the country.” At the time of writing, data from the Gelephu station (bordering the Indian State of Assam) were not readily available. Once they are, it will be possible to identify the severity of the transboundary pollution, the quality of the air being breathed, whether its correlated with declines in human health, and whether it could be the culprit in the reduced agricultural productivity being reported by farmers in the southern reaches of Bhutan.

¹⁷ Ibid, p. 50.

¹⁸ Bhutan is party to the 1998 Male Declaration on Control and Prevention of Air Pollution and its Likely Trans-boundary Effects for South Asia. UNEP serve as the Secretariat for the Declaration, which focuses on the need for countries to carry forward, or initiate studies and programmes on air pollution in each country in the South Asian subregion. NEC, 2008, p. 54.