

Figure. Planetary Boundaries. From Rockström, J., et al. (2009) "A Safe Operation Control for Universality."

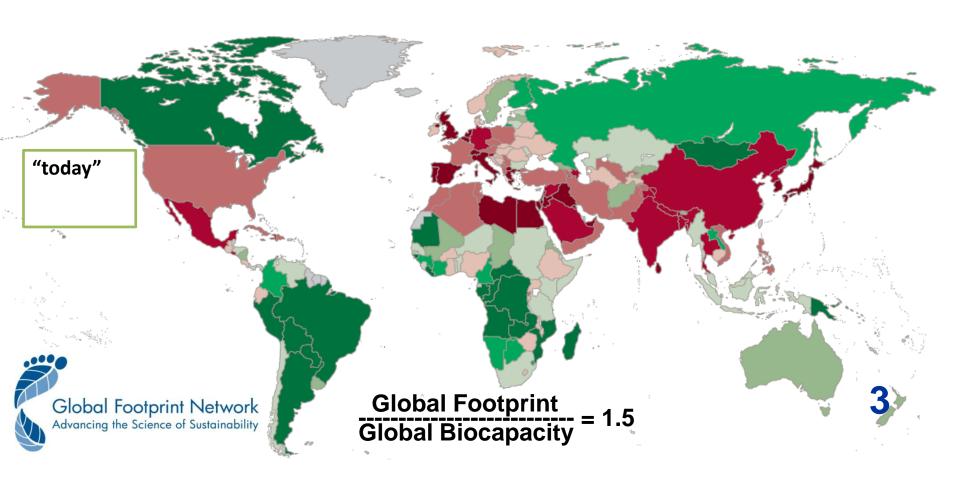
Nature 461: 472-475.

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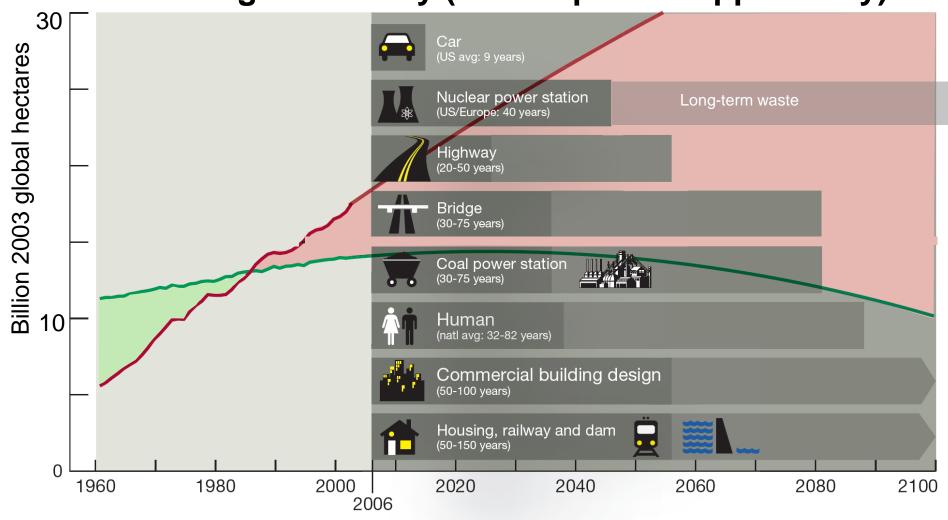
GLOBAL DIALOGUE

ON SUSTAINABLE DEVELOPMENT

Ecological Creditors and Ecological Debtors



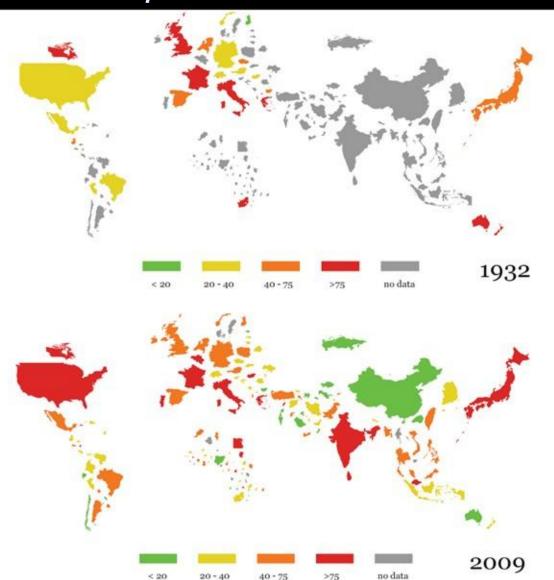
2050 is being built today (as a trap or an opportunity)



A Tale of Two Crises:

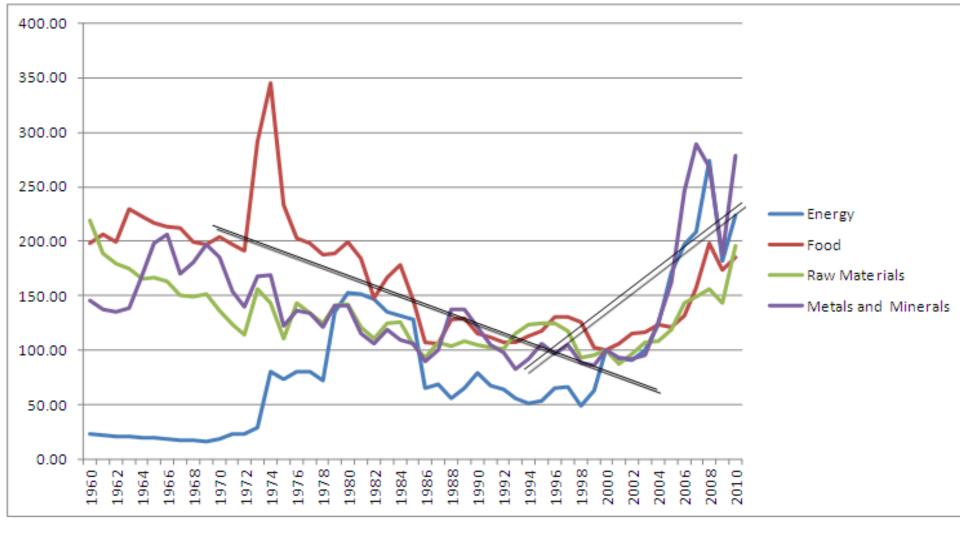
The Great Depression Vs. The Great Recession





The current situation looks worse because of three factors:

- Weaker starting positions (debt in 2007 20 ppt. higher than in 1928)
- Sharper drop in revenues (due to stronger assetprice/financial sector link)
- Stronger fiscal stimulus and financial sector support



Commodity prices (WB index)

Source: World Bank – pink sheet

LONG-TERM Debt is an Intergenerational Issue

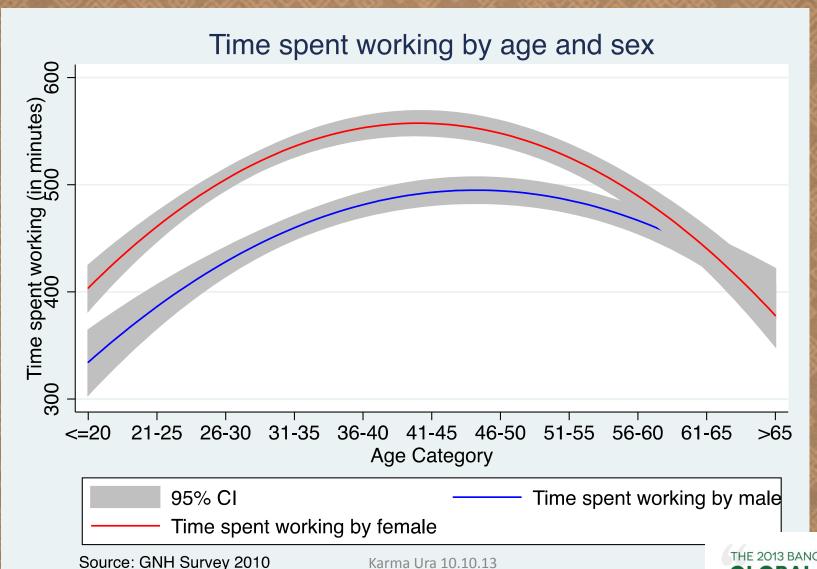
- The burden of growing long-term debt will fall on younger generations as
 - drastically higher taxes
 - cut benefits
 - lower living standards
 - fewer choices for public spending
 - ALL OF THE ABOVE



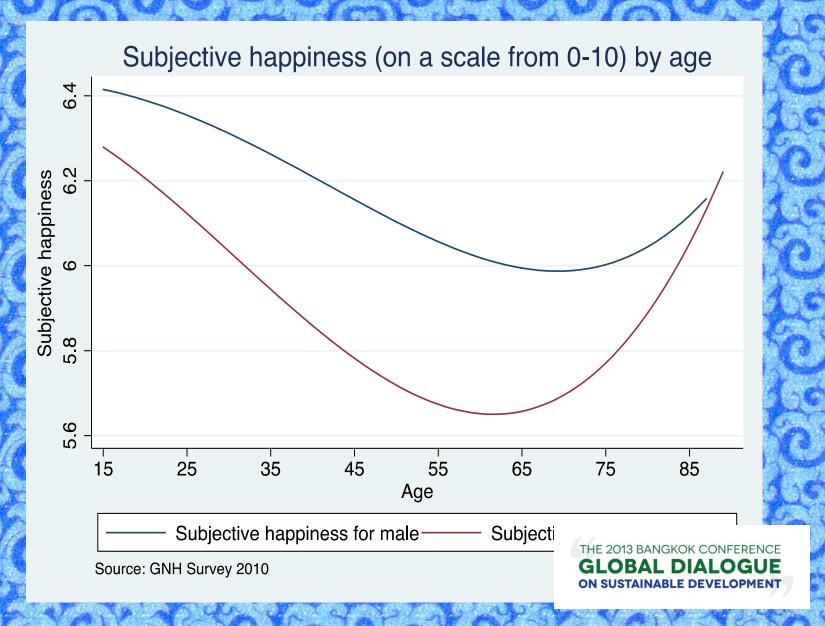




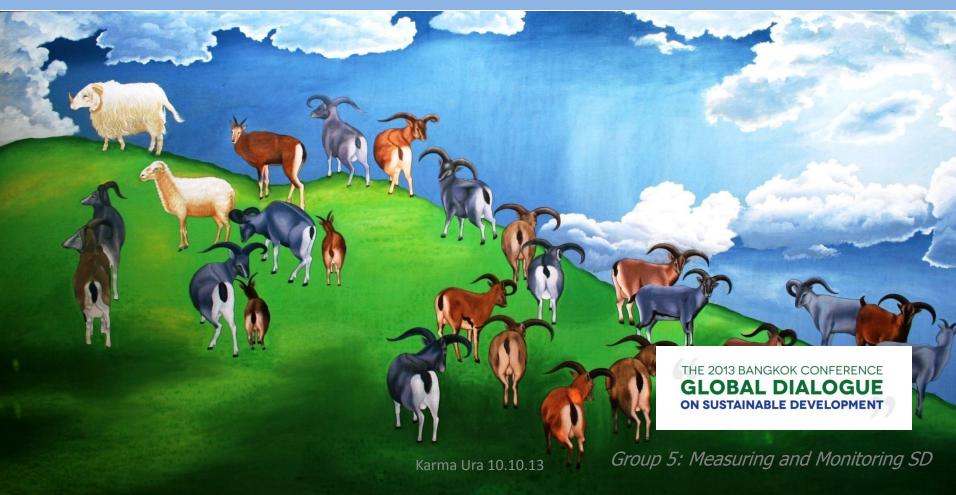
Bhutanese people work longest hours in midlife, between 46 to 50, peaking at 518 minutes a day



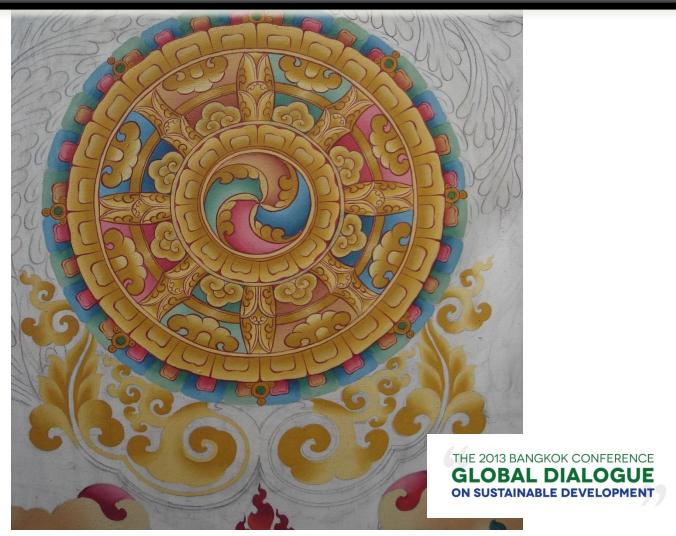
ON SUSTAINABLE DEVELOPME



- Results of GNH index for 2010,
- 10.4% of people were 'unhappy';
- 47.8% are 'narrowly happy',
- 32.6% are 'extensively happy'; and
- 8.3% are 'deeply happy'.

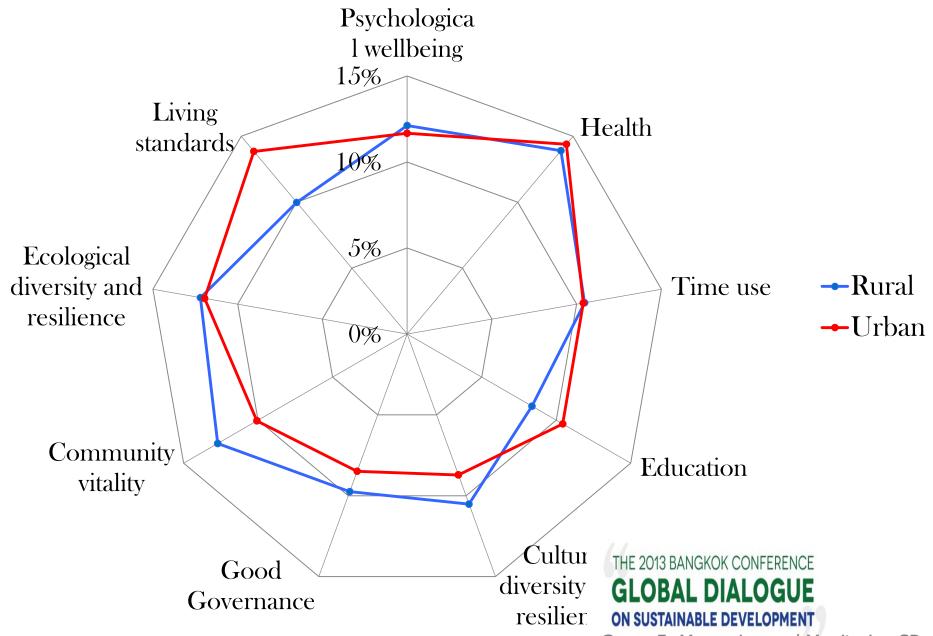


WHEEL AS HOLISTIC SYMBOL (HOLISTIC = wellbeing, global, multi-dimensional, timeless)





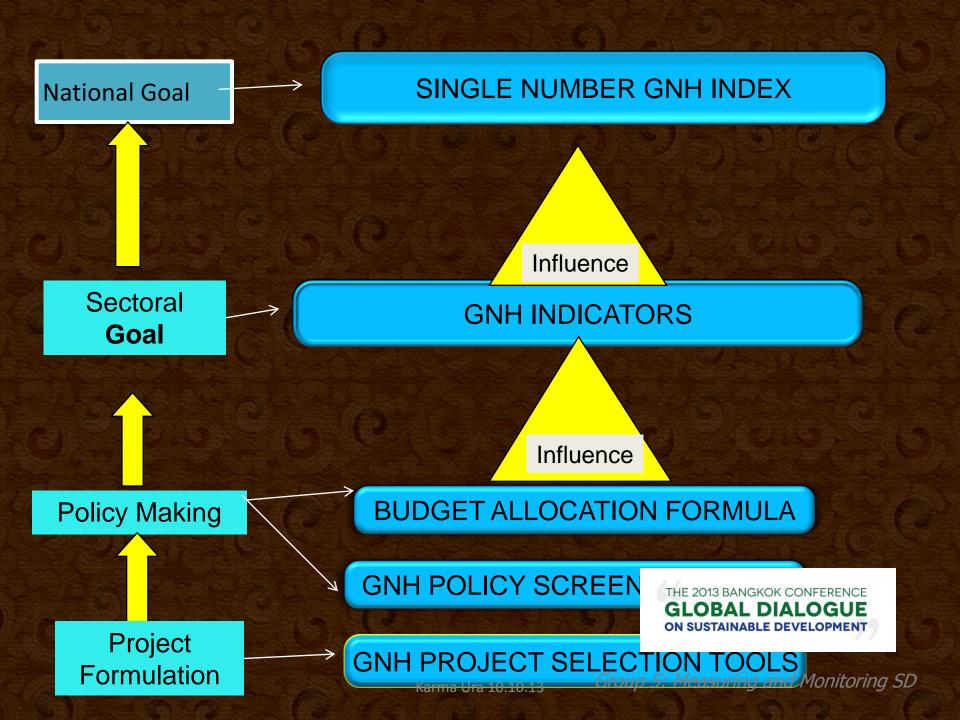
Contribution of domains to happiness by area of residence

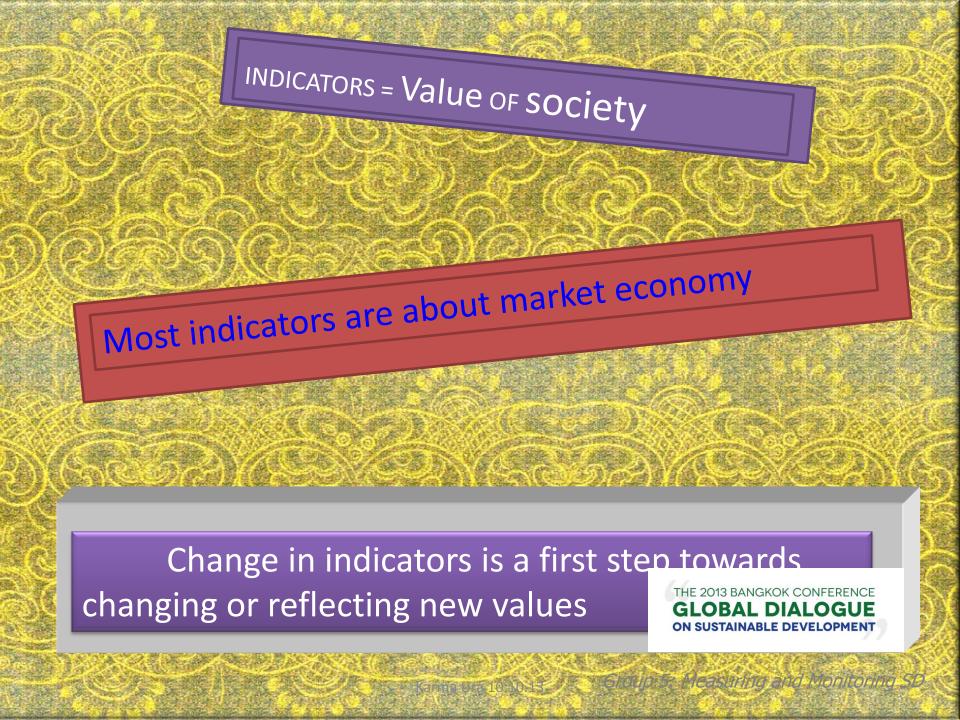


Group 5: Measuring and Monitoring SD

- 1. Setting an alternative framework of development (but in what new direction?)
- 2. Providing indicators to sectors to guide development
- 3. Allocating resources in accordance with GNH targets and GNH screening tools
- 4. Measuring people's happiness and well being
- 5. Measuring progress over time

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Education

- Literacy
- Educational Level Knowledge
- Values

Health

- Mental health Self reported health
- •Healthy days Disability

Living Standards

Household per capita

Assets

Housing

Life satisfaction

Psychological

- Positive emotions
- •Negative emotions
- Spirituality

Wellbeing

33 **GNH** Indicators

Ecological Diversity and Resilience

- Ecological Issues
- Responsibility towards environment
- Wildlife damage (Rural)
- Urbanization issues

Community Vitality

- Donations (time & money)
- Community relationship
- Family
- Safety

Good Governance

- Gov't performance
- Fundamental rights
- Services
- Political Participation

Cultural Diversity and Resilience

- Native Language
- Artiteara Skallticipation
- Conduct

Time Use

- Work
- Sleep

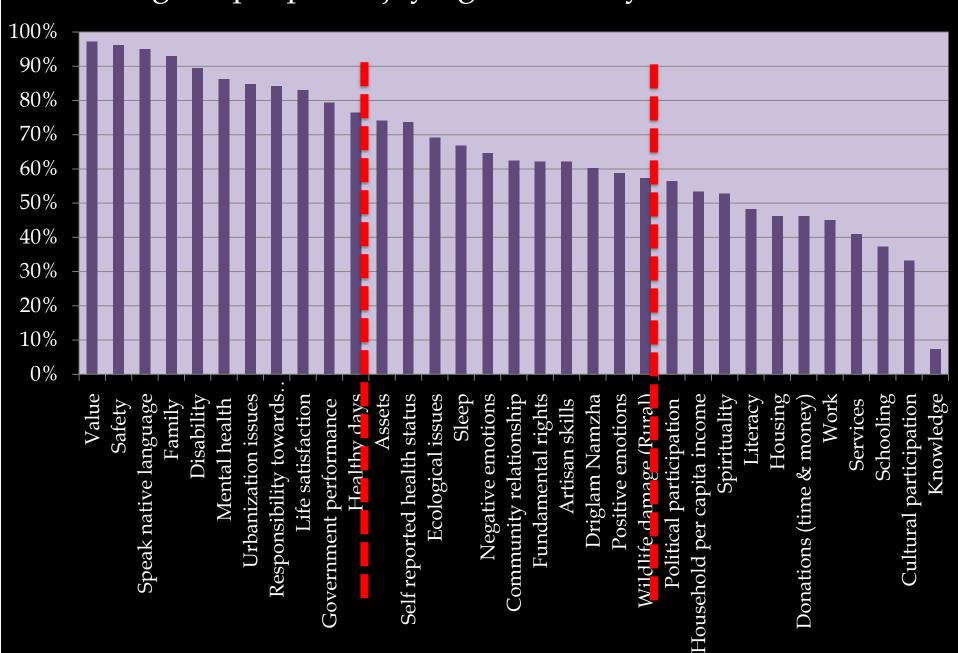
THE 2013 BANGKOK CONFERENCE **GLOBAL DIALOGUE** ON SUSTAINABLE DEVELOPMENT

Karma Ora 10.10.13

Group 5: Measuring and Monitoring SD

Domain	Indicators	Weight	Domain	Indicators	Weight
Psychological wellbeing	Life satisfaction	33%	Time use	Work	50%
	Positive emotions	17%	Time use	Sleep	50%
	Negative emotions	17%	Good	Political participation	40%
	Spirituality	33%	governance	Services	40%
Health	Self-reported health	10%		Governance performance	10%
	Healthy days	30%		Fundamental rights	10%
	Disability	30%		Donation (time & money)	30%
	Mental health	30%	Community	Safety	30%
Education	Literacy	30%	vitality	Community relationship	20%
	Schooling	30%		Family	20%
	Knowledge	20%		Wildlife damage	40%
	Value	20%	Ecological	Urban issues	40%
Cultural diversity and resilience	Zorig chusum skills (artistic skills)	30%	diversity and resilience	Responsibility towards environment	10%
	Cultural participation	30%		Ecological issues	10%
	Speak native language	20%		Per capita income	33%
	Driglam Namzha (the Way of Harmony)	20%	Living standards	Assets	33%
				Housing	33%

Percentage of people enjoying sufficiency in each indicators



Distribution of people by happiness level

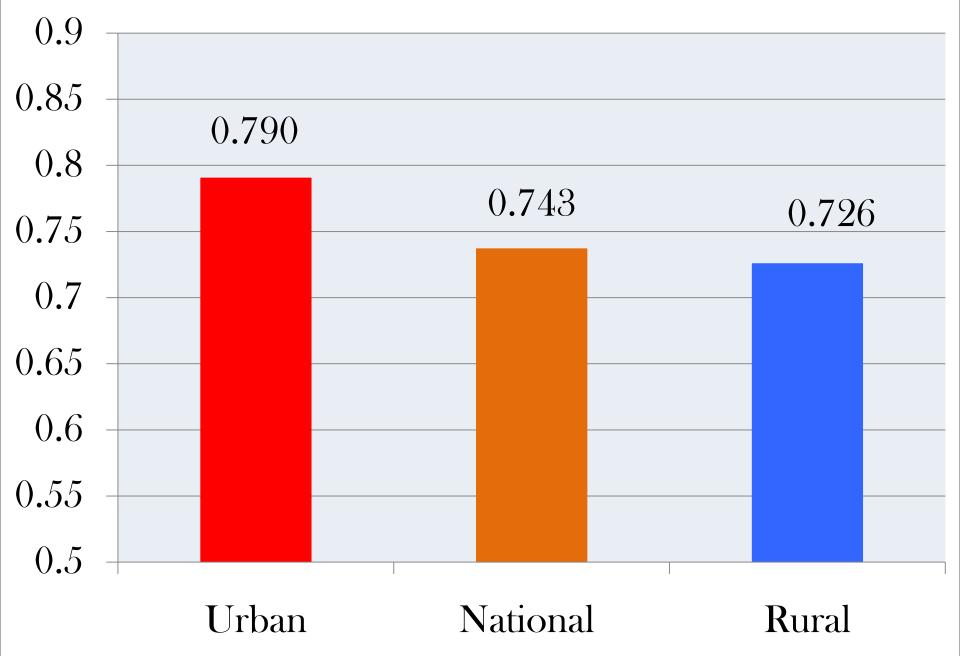
	Definition of groups— Sufficiency in:	Per cent of population who are:	Average sufficiency of each person across domains
Happy	66%-100%	40.90%	72.90%
Deeply Happy	77%-100%	8.30%	81.50%
Extensively Happy	66%-76%	32.60%	70.70%
Not-Yet-Happy	0-65%	59.10%	56.60%
Narrowly Happy	50%-65%	48.70%	59.10%
Unhappy	0-4/%	10.40%	44.70%

Unhappy 0-4/% 10.40% 44.709

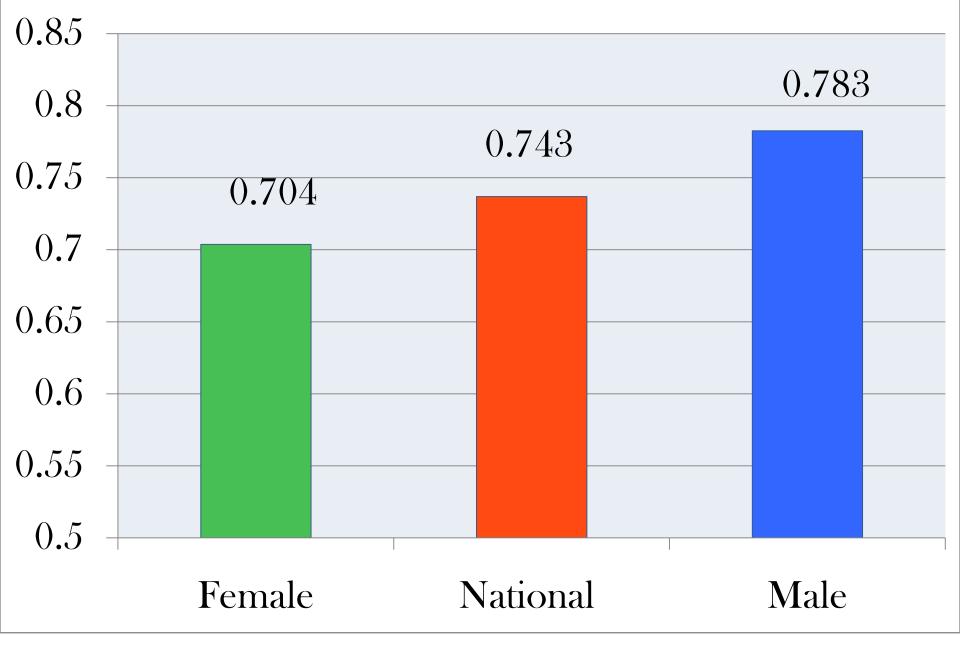
GNH =
$$H_h$$
 + (H_n x A^{suf})

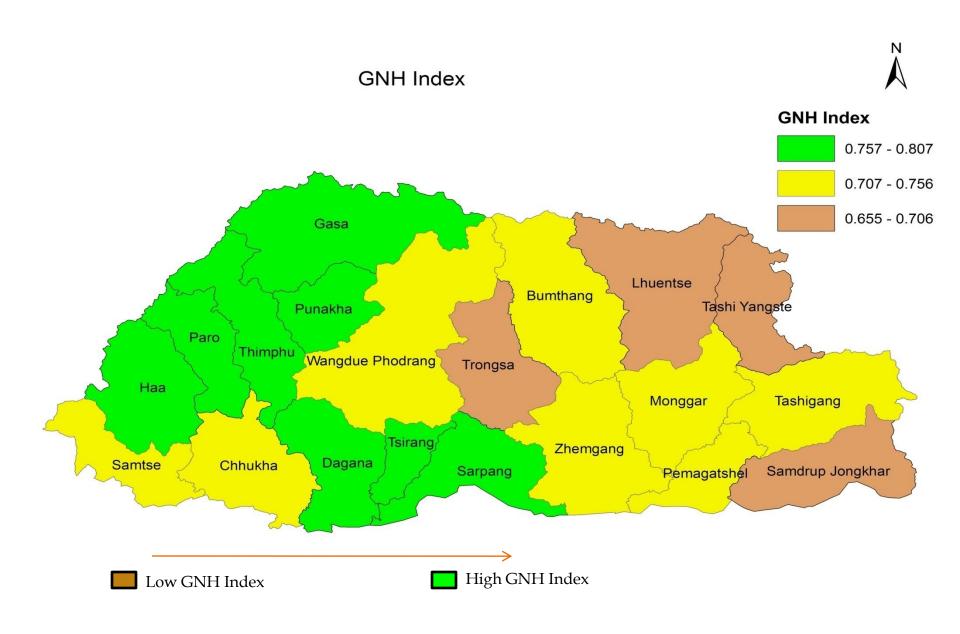
= 0.409 + (0.591 x 0.566) = 0.743

GNH Index by area of residence

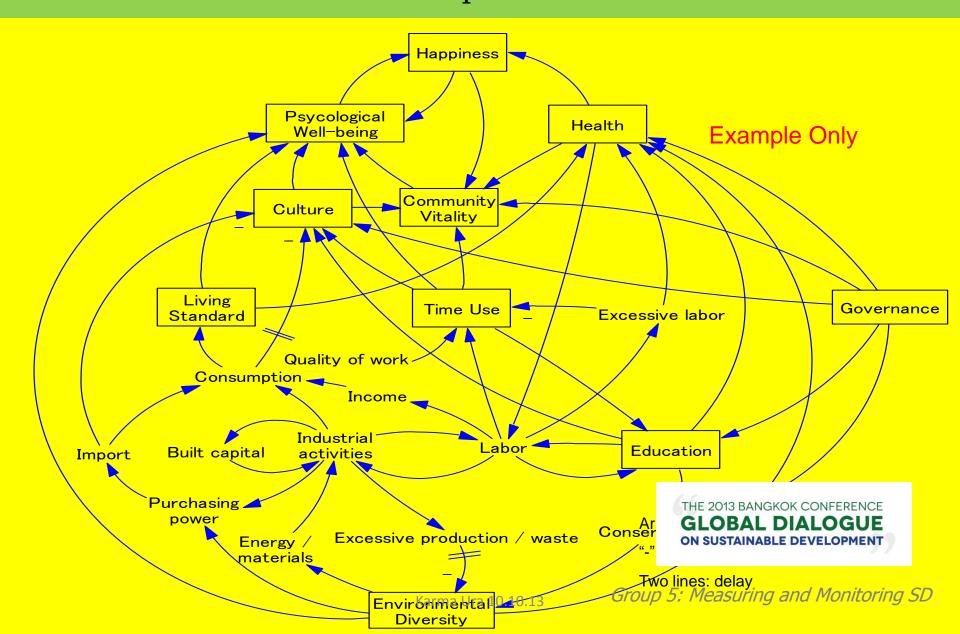


GNH Index by gender





Relationships among Domains/Variables: A Holistic View = Interdependence



Seven factors affect our happiness:

- income
- health
- family relationships
- work
- community and friends
- personal freedom, autonomy and choice
- personal values.
- Except for health and income, they are all concerned with the quality of our relationships.

Happiness: Lessons from a New Science, R.Layard, p.62, New York, 2005



- 1. Have sufficient household income
- 2. Have sufficient household equipment and own land
- 3. Cultivate high positive emotions and low negative emotions,
- 4. Have good physical and mental health.
- 5. Practise meditation.
- 6. Do not over work yourself,
- 7. Socialize regularly with your family,
- 8. Be trustworthy and able to trust fellow citizens,
- 9. Have an age before or after the "mid-life crisis".

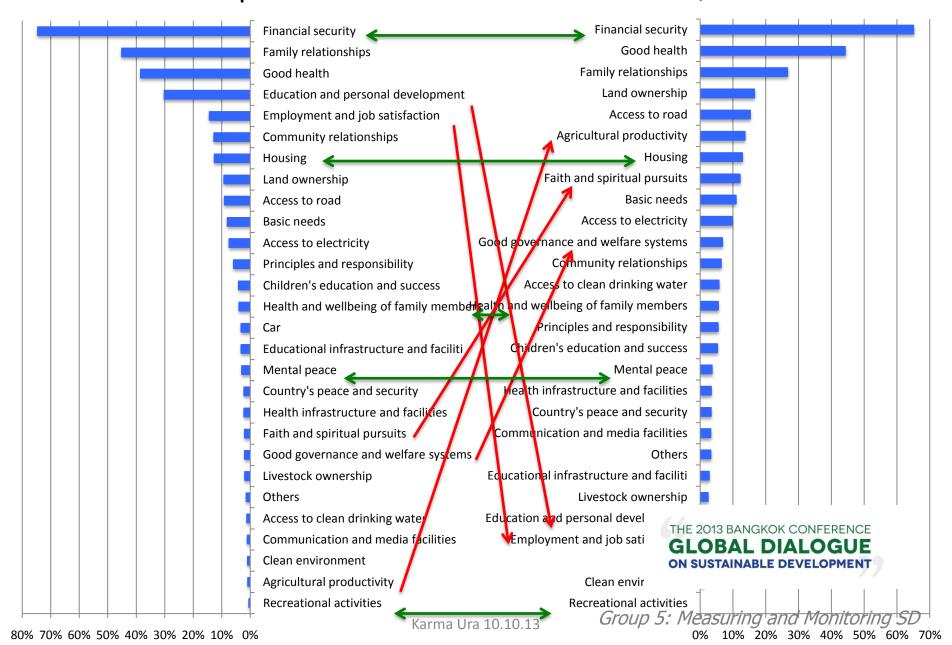
Regression results: Some variables that are significant and positively related to SWB in Bhutan

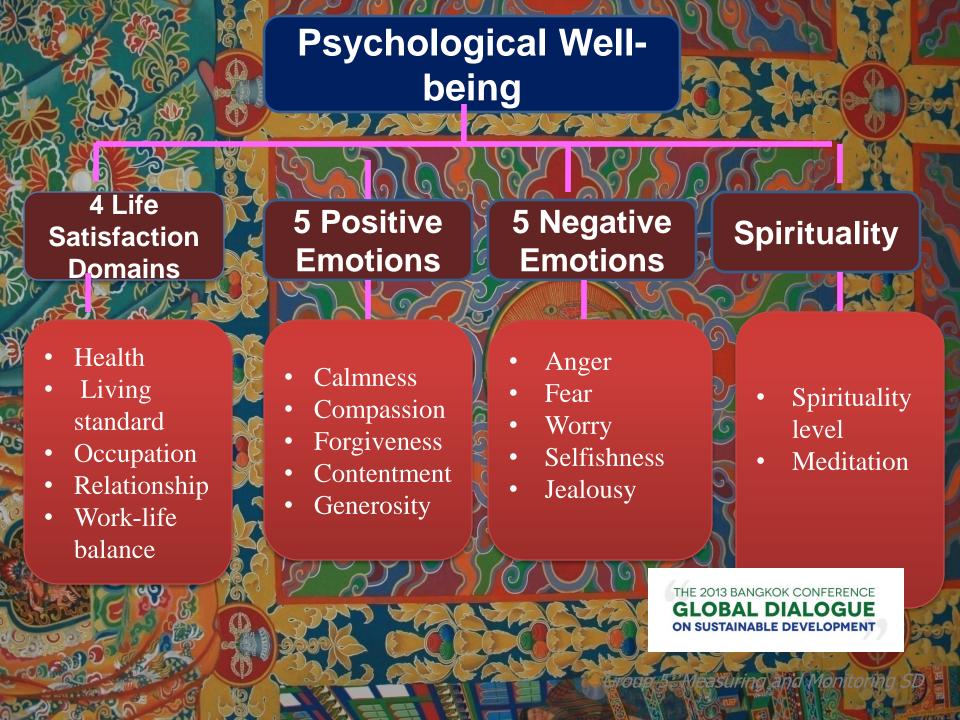
SOCIAL TIME: 34 % of Bhutanese socialize every day, socializing with members of family for an average of 63 minutes and another 89 minutes with friends and neighbors and relatives.



Sources of Happiness (<=20 years) % of respondents

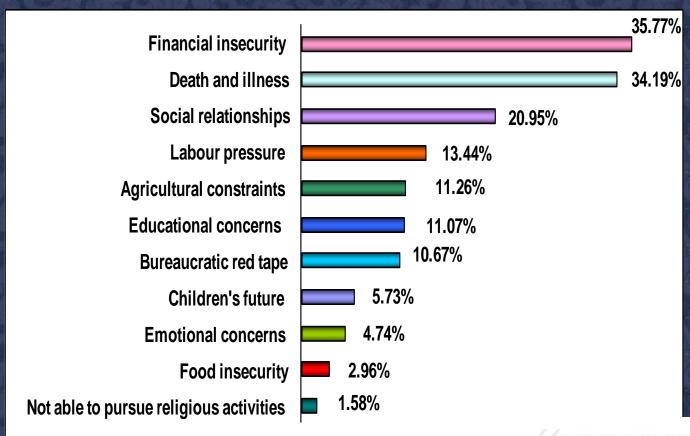
Sources of Happiness (>65 years) % of respondents



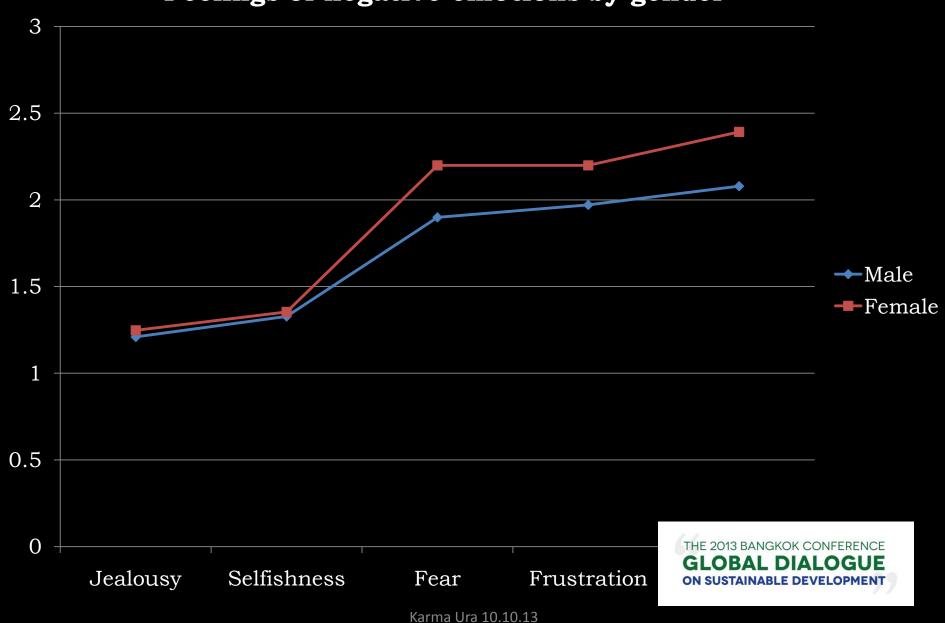




Causal factors of stress



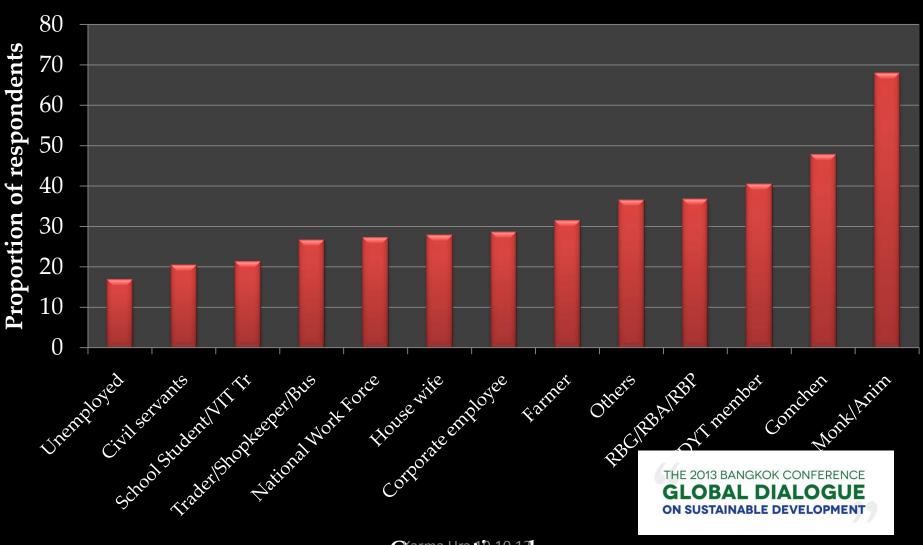
Feelings of negative emotions by gender



Group 5: Measuring and Monitoring SD



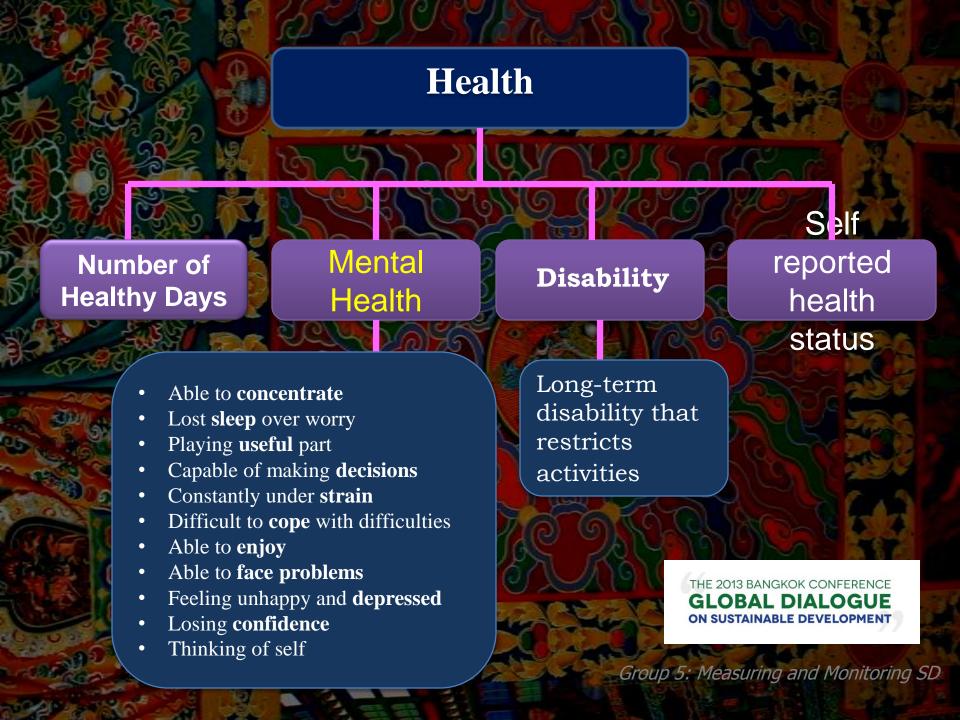
% "Never" experienced "Anger" in the last few weeks by occupation



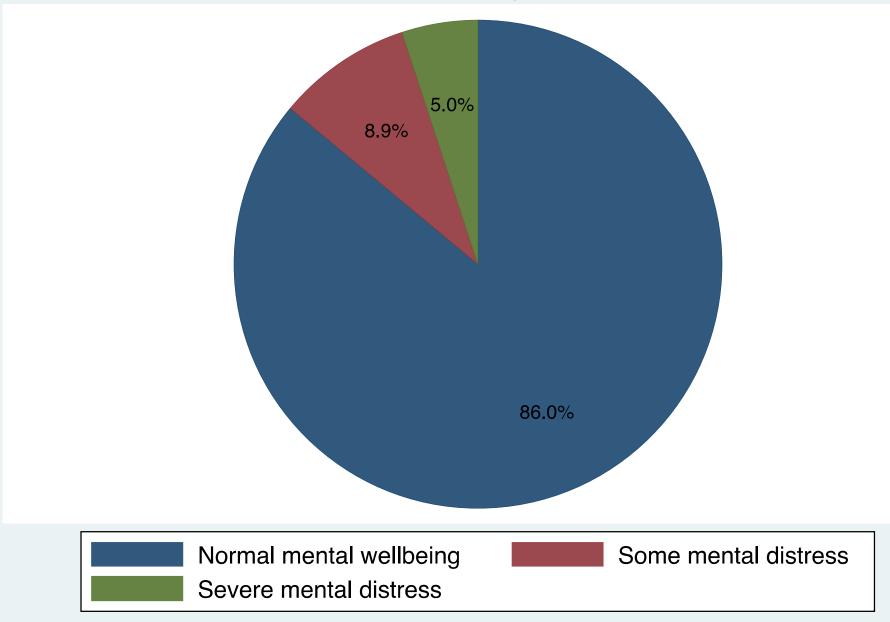
Occupational groups
Group 5: Measuring and Monitoring SD

Experience of anger. 5% of adult Bhutanese experience anger than once a week





Mental wellbeing (GHQ-12)



Source: GNH Survey 2010

Thresholds

Indicator	Response range	Sufficiency	% meeting sufficiency
Self reported	1(very poor)-	Good or excellent	73.8
health status	5(excellent)		
Healthy days	0(worst)-30(best)	26 days and above	76.5
Disability		No disability or it does	89.5
		not limit their ability to	
		perform daily activities	
Mental health	0-15(severe	Normal mental well-	86.2
(GHQ)	distress)-21-	being	
	36(normal mental		
	well-being)		





Skills formed by actions and practice in Psychological wellbeing Domain

Skills formed by actions and practice in Health Domain

Skills formed by actions and practice in Ecological Resilience Domain

Gratitude, competence, balance, self confidence, courage, mindfulness, delayed gratificatioon, optimism

exercises of three axis of being – speech, mind and body; food as medicine, non-toxic mental and physical state, slow wave sleep,

Reverence, non-dominance, ecoconsciousness, aesthotic nature
appreciatio
ultilitarian,
nability, inter species empatny,

Group 5: Measuring and Monitoring St

Social support

- Proportion of household income donated
- Days of volunteering

Safety

 Having been a recent victim of crime

Community Vitality

Community relationship

- Sense of belonging
- Trust neighbours

Family relationship

- Family care
- Wish you were not part of your family
- Argue too much
- Feel like a stranger in family
- Family are understanding
- Family are a real source of comfort

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ON SUSTAINABLE DEVELOPMENT





Environmental responsibility

Urban issues

- Traffic congestion
- Absence/inadequ ate green spaces
- Lack of pedestrian friendly streets
- Urban sprawl



Ecological Diversity and Resilience





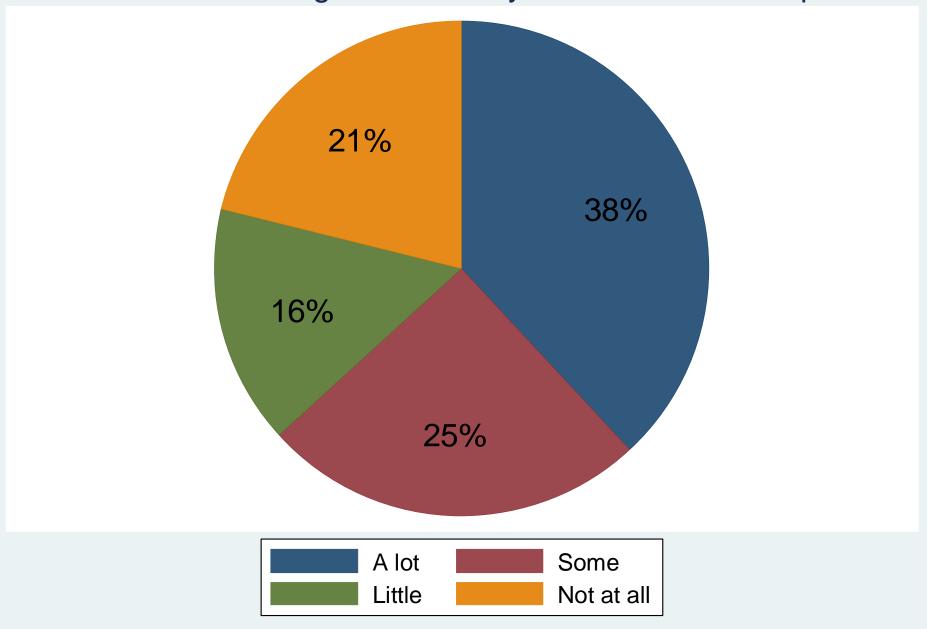
Wildlife damage

- Wild animals are a constraint to crops.
- Crops have been damaged by wild animals

Pollution

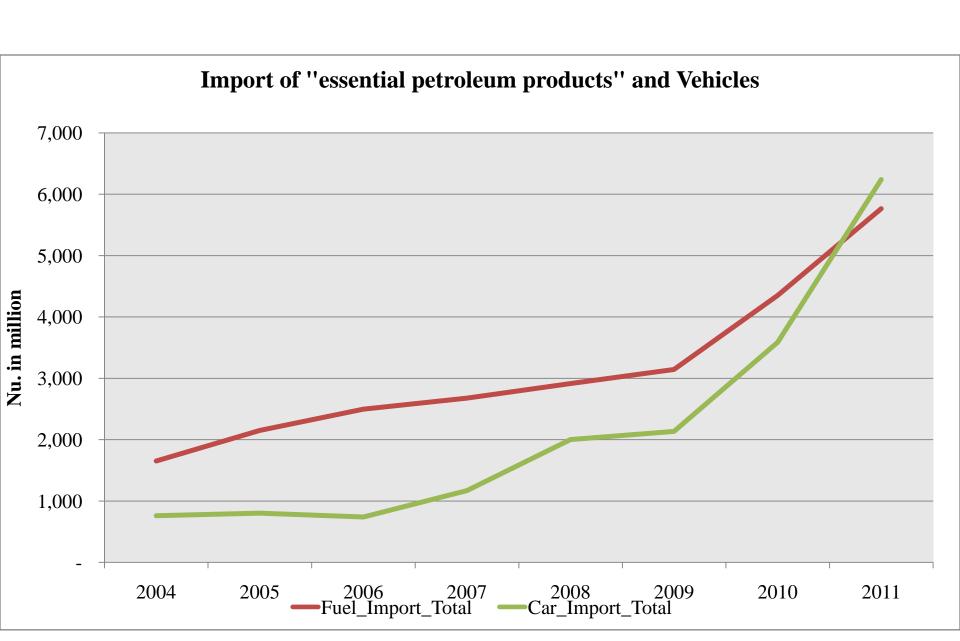
- Pollution of rivers and streams
- Air pollution
- Absence of waste disposal sites
- Landslides
- Soil erosion
- Floods
- Littering
- Noise pollution

Extent of damages caused by wild animals to crops

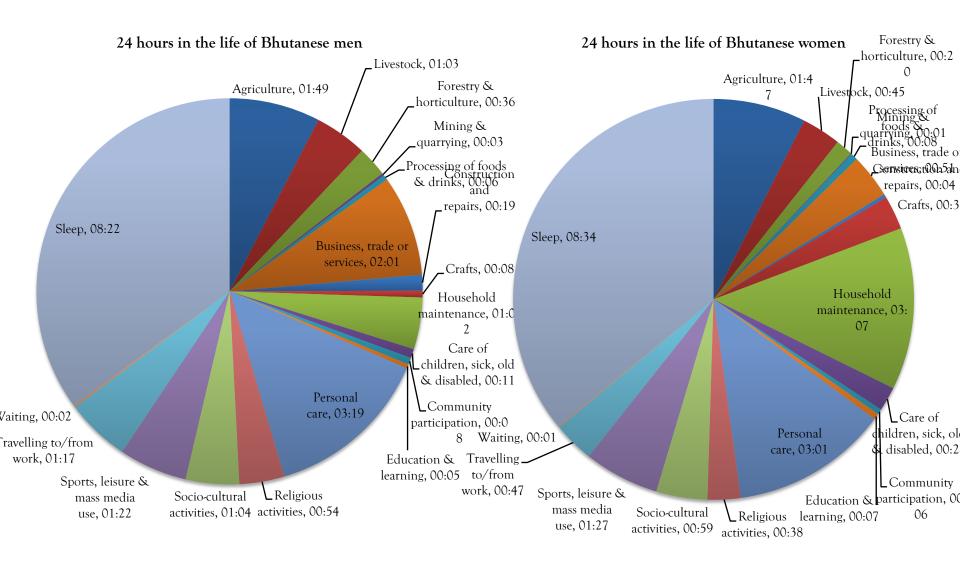


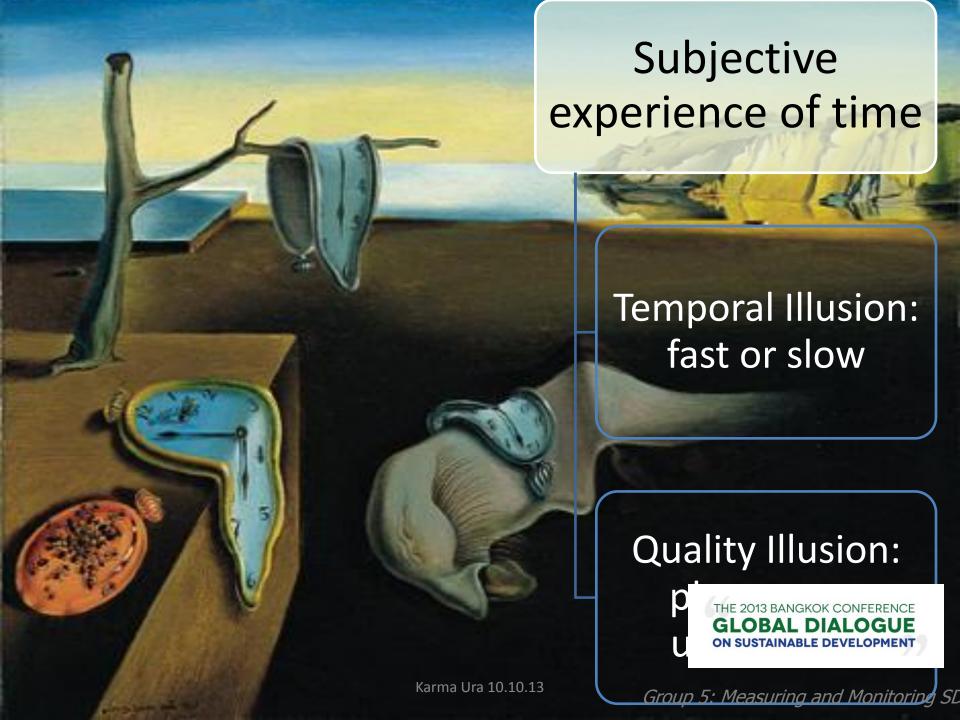
Thresholds

			% meeting
Indicator	Range	Sufficiency	sufficiency
Pollution	1(major concern)-4(not a concern)	Not a concern, minor concern and some concern in at least 6 out of 8 ecological issues	69.0
Environmental responsibility	1(not at all responsible)- 4(highly responsible)	Highly responsible	84.4
Wildlife damage (Rural)	1 (major constraint)-4 (not a constraint)	Major constraint or some constraint plus a lot or some crops have been damaged	57.9
Urban issues	1(major concern)-4 (not a concern)	Not a concern or minor concern or some concern in at least 3 urban issues	84.4









Socioeconomic Construction of Time or Experience



Providing opportunities for volunteer work and civic engagement

- Through volunteer NGOs

Providing opportunities to be engaged in meaningful contribution for elderly people

Promotion of physical exercise at work

Time Use

meaningful occupations for unemployed

(caring for grand children)

Incentives for employers to encourage their employees undertake work from home

Labour Legislations – flexible work schedule

Creation of small businesses to provide people with more autonomy in the work domain

Reasonable caps
on overtime
hours or
incentives to
businesses to
reduce overwork

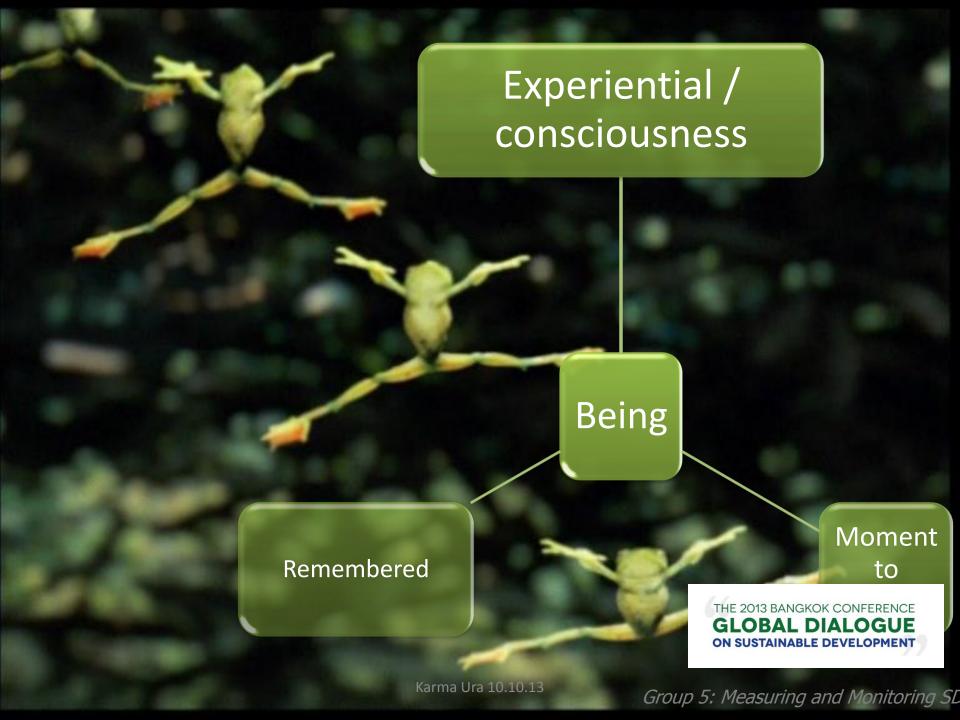
Mandatory shorter
maximum working
week of 35 hours or
compressed working
week of 40 hours
worked over four
days

Time Use

Incentives for businesses switching from manual labour to automated.

Monotonous works – diversification

Giving workers heading for retirement a five-year window



Momentariness

Time categories frame or order our experiences Momentariness which are infinitesimally small moments we cannot know make up life.

Momentariness of an event is shorter than the consciousness of the momentariness of the event (Inada 1974).

"experiential events do not take place or flow in time. Rather,...events flow as time..." (Inada 1974)

The mind compounds momentariness into an experiential event. (Longchen Ramjam)

Increasing GNH

To increase happiness,

We have to identify people who are not yet happy.

And we have to ask, where do they lack sufficiency? What more must be done?

This analysis is of direct relevance for policy.

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GLOBAL DIALOGUE
ON SUSTAINABLE DEVELOPMENT

Leadership is focusing from ones own benefits to awakening all, through compassion, strength and knowledge of suffering



1. Objectives

- Systematically assess impacts of any policy and project on GNH
- Select GNH enhancing policies and projects
- Reject projects and policies that adversely affect key determinants of GNH
- Key GNH determinants based on a pilot and national GNH surveys

2. Benefits

- Consideration of GNH dimensions
- Promote holistic development
- Acknowledge potential negative affects
- Penalizes sectors
- Scoring by heterogeneous groups

4. Biodiversity				
Will probably decrease the health and diversity of wildlife	Do not know the effects on wildlife	Should have little or no effect on the health and diversity of wildlife	Will probably increase the health and diversity of wildlife	
1	2	3	4	

5. Nature				
Will probably provide a net decrease in the number of persons who can access and enjoy nature	Do not know the effects on peoples ability to access and enjoy nature	Should have little or no effect on peoples ability to access and enjoy nature	Will probably provide a net increase in the number of persons who can access and enjoy nature	
1	2	3	4	

6. Spiritual			
Will probably decrease the opportunities that people have to spend time in spiritual pursuits.	Do not know the effect on opportunities that people have to spend time in spiritual pursuits.	Should have little or no effect on opportunities that people have to spend time in spiritual pursuits.	Should increase the opportunities that people have to spend time in spiritual pursuits.
1	2	3	4

13. Stress				
Will probably increase the number of people feeling stressed in the population	Do not know the effect on the number of people feeling stressed in the population in the population	Should have little or no effect on the number of people feeling stressed in the population in the population	Should decrease the number of people feeling stressed in the population in the population	
1	2	3	4	

14. Information			
Will probably decrease the amount of information that most people have about government activities	Do not know the effect on the amount of information that most people have about government activities	Should have little or no effect on the amount of information that most people have about government activities	Should increase the amount of information that people have about government activities
1	2	3	4

15. Culture			
Should decrease the opportunity for people to learn about or participate in cultural practices and traditions	Do not know the effect on opportunity to learn about or participate in cultural practices and traditions	Should have little or no effect on opportunity to learn about or participate in cultural practices and traditions	Should increase opportunity to learn about or participate in cultural practices and traditions.
1	2	3	4

16. Corruption				
Will probably increase the opportunity for corrupt behaviour within government	Do not know the effect on opportunity for corrupt behaviour in government	Should have little or no effect on opportunity for corrupt behaviour in government	Should decrease the opportunity for corrupt behaviour in government	
1	2	3	4	

17. Discrimination			
Will increase probability of discrimination based on ethnicity, religion or gender	Do not know the effect on probability of discrimination based on ethnicity, religion or gender	Should have little or no effect on probability of discrimination based on ethnicity, religion or gender	Should decrease the probability of discrimination based on ethnicity, religion or gender
1	2	3	4

18. Rights			
Should decrease protection for individual rights	Do not know the effect on protection for individual rights	Should have little or no effect on protection for individual rights	Should increase protection for individual rights
1	2	3	4

22. Participation				
Will probably decrease the opportunity for equitable participation in government decisions	Do not know the effect on opportunity to participate in government decisions	Should have little or no effect on equitable participation in government decisions	Should increase the opportunity for equitable participation in government decisions	
1	2	3	4	

23. Pollution			
Will probably increase the amount of pollution or degradation of the air, land or water	Do not know the effects on pollution or degradation of the air, land or water	Will probably not have any effect on pollution or degradation of the air, land or water n	Will probably decrease the amount of pollution or degradation of the air, land or water
1	2	3	4

Score

1. Security	1 7. Family 1
2. Equity	1 8. Support 1
3. Productivity	4 9. Learning 4
4. Biodiversity	1 10. Recreation 1
5. Nature	1 11. Material 4
6. Spiritual	1 (12. Health 2

 13. Stress
 1 (19. Judiciary1)
 4

 14. Information
 20. Judiciary2
 3

 15. Culture
 1 (21. Values)
 1

 16. Corruption
 2 (22. Participation)
 2

 17. Discrimination
 4 (23. Pollution)
 1

 18. Rights
 4

Final score =
$$49/92$$
; neutral score = $69 = 3 \times 23$







Group 5: Measuring and Monitoring SL