



# **Pakistan Health Issues and Social Norms 2010 Floods – A New Challenge**

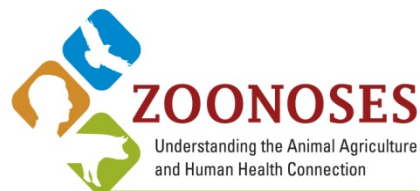
**Dr. Amena Hasan**  
**CEO - Business for Social Progress**  
*September 23, 2010*

*at*

**International Symposium: ZOONOSIS- Understanding the  
Animal Agriculture and Human Health Connection**

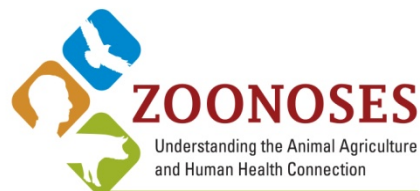
# Presentation Outline

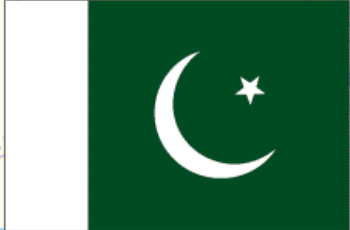
- Introduction to Pakistan
- Livestock Statistics
- Salient features of Animal Agriculture
- Animal Human nexus -Zoonosis Challenge
- Women's role in Animal Agriculture
- Situation in Area inundated with flood
- BSP response to 2010 floods in Pakistan



# Introduction to Pakistan

- Southeast sharing borders with India, China, Iran and Afghanistan and Arabian sea
- Population > 170 million - world's 6<sup>th</sup> populous country
- 70% of Pakistan's population resides in rural area
- Source of income in the rural areas is Agriculture
- Staple food is wheat but (milk is the main component of diet of rural dwellers).
- Multicultural and multi-ethnic society

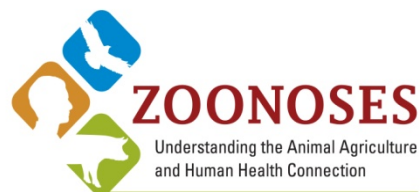


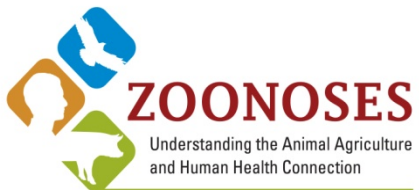


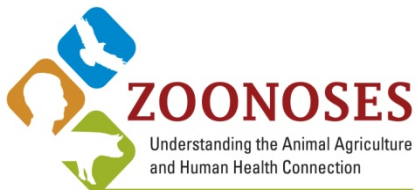
# PAKISTAN

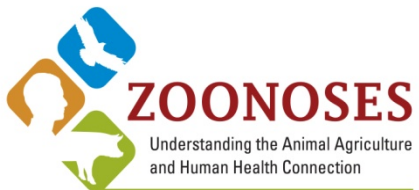
# Introduction to Pakistan

- Pakistan is a country blessed with immense natural resources and beautiful landscape.
- One visit the urban centers like Karachi, Lahore, Sialkot, Faisalabad, Peshawar and Islamabad one can see the mix of history, culture, industry and academic centers presenting tremendous opportunities.



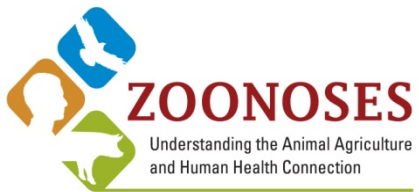




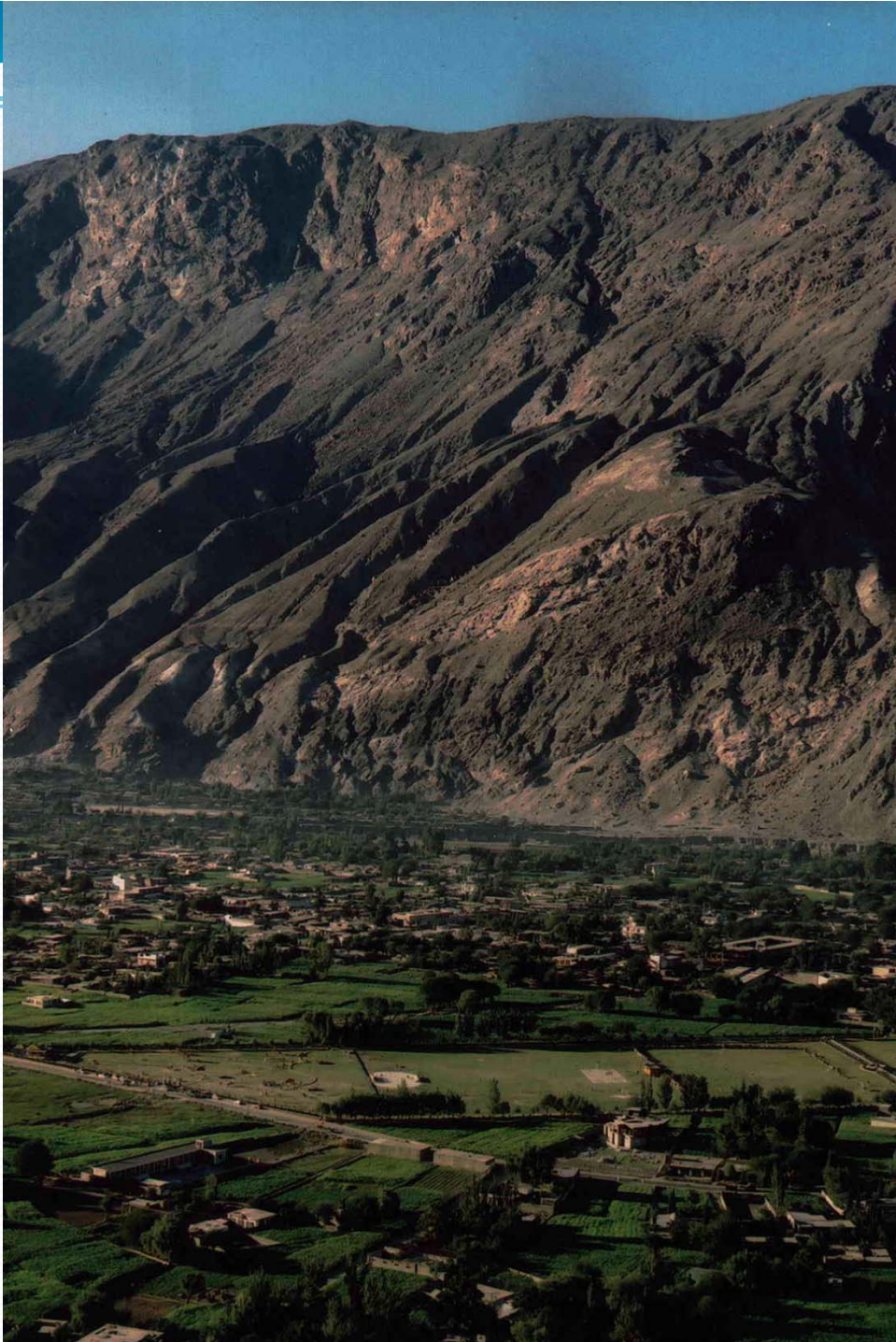


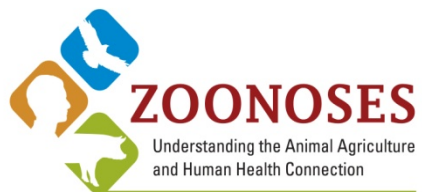


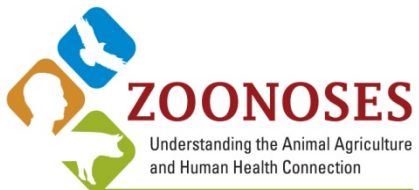


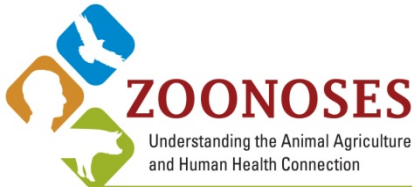


Understanding the Animal Agriculture  
and Human Health Connection









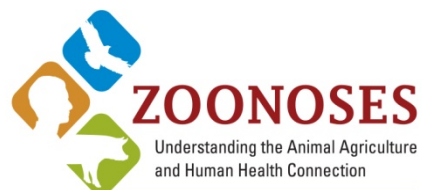
# Livestock Statistics



## Livestock Population (Million Numbers)

Species	1996 Census	2006 Census	Increase (1996-2006)	Annual Growth Rate (1996 to 2006)
Cattle	20.42	29.56	45%	4.5%
Buffalo	20.27	27.34	35%	3.5%
Sheep	23.54	26.48	13%	1.3%
Goat	41.17	53.79	31%	3.1%
Camels	0.82	0.92	13%	1.3%
Asses	3.56	4.27	20%	2.0%
Horses	0.33	0.34	3%	0.3%
Mules	0.10	0.16	18%	1.8%

Source:- M/O Food, Agriculture & Livestock, Livestock Wing Last updated: 2007-04-04



## Livestock Production (Million Tons)

S. No.	Milk type	2003-04	2004-05	2005-06
1.	<b>Milk (Gross Prod.)</b>	35.60	36.62	37.35
	i)Cows	10.84	11.06	11.29
	ii)Buffalo	24.05	24.86	25.36
	iii)Sheep	0.03	0.03	0.03
	iv)Goat	0.68	0.68	0.68
2.	<b>Milk (Available for Human cosn.)</b>	28.62	29.44	31.25
	i)Cows	8.68	8.84	9.40
	ii)Buffalo	19.24	19.88	21.14
	iii)Sheep	0.03	0.03	0.03
	iv)Goat	0.68	0.68	0.68
3.	<b>Meat</b>	2.19	2.24	2.42
	i)Beef	1.09	1.12	1.17
	ii)Mutton	0.72	0.74	0.78
	iii)Poultry Meat	0.38	0.38	0.46
4.	<b>Eggs</b>	8102	8529	9057

Source:- Ministry of Food, Agriculture & Livestock, Livestock Wing Last updated: 2007-04-04




# Salient features of Animal Agriculture

- Animal agriculture does not yet exist independently but complementary to the agrarian economy
  - Commercial Poultry farms
  - Fattening (large and small ruminants) farms
  - Commercial dairy Farms

# Salient features of Animal Agriculture

- Agriculture production is a family operation involving all members of family
- Most are subsistence farmers with small land holdings, some back yard poultry and few milch animals
- < 5% of animal holders have 20 or more milch animals (Livestock censuses 2006 even)
- Majority own 4 to 5 milch animals with usually one or two in milk at a time.



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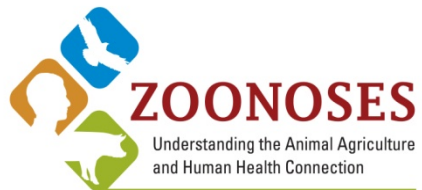


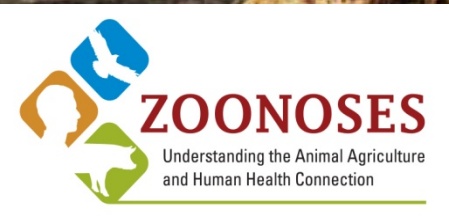



# What livestock means for small farmers

- Subsistence agriculture (manure, land preparation)
- Draught power
- Transportation
- Dietary need
- Energy needs (dung cakes)
- Animal Bank
- Assets (enchased when needed)
- Social aspect (status in society)





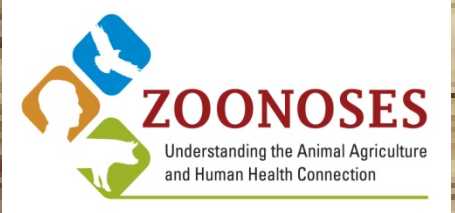





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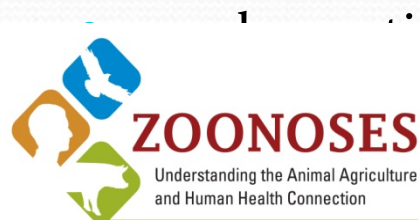
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# Salient Features of Animal Agriculture



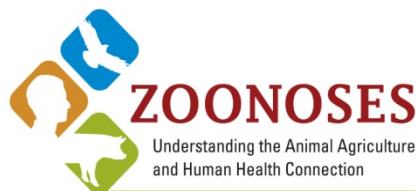
# Animal Human nexus -Zoonosis Challenge

- Mycobacterium bovis the cause of zoonotic tuberculosis was isolated from lactating animals which makes it most important for public health.
- 6.91% of buffaloes and 8.64% cows were found positive
- Mycobacterium bovis and isolated from Tuberculin positive buffaloes
  - milk of 28.07%
  - nasal secretion of 12.18%
  - Mycobacterium bovis and isolated from Tuberculin positive COWS
    - milk of 25%
    - nasal secretion of 12.5%



# Animal Human nexus -Zoonosis Challenge

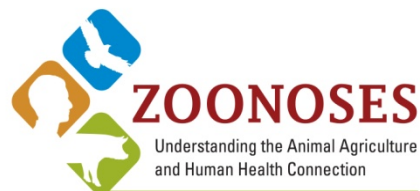
- Bovine tuberculosis is a chronic contagious respiratory disease of cattle spreading horizontally, within and between species, by the aerosol and ingestion 18. Bovine tuberculosis is occurring in almost all developed and developing nations of world. The incidence of disease is not only higher in the developing nations but in the absence of any national control and eradication program, is also increasing worldwide particularly in the Asian, African and Latin American countries 3.





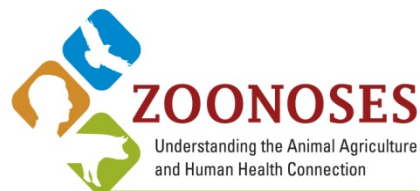
# Animal Human nexus -Zoonosis Challenge

- In Indo Pak the incidence of Bovine tuberculosis in cattle and buffalo is nearly 2.25% of the population, in 1969 13 and in 1989 19 the incidence of disease was increased up to 7.3% in cattle and buffaloes being slaughtered at Lahore abattoirs. In 1975 it was found that 10% of the buffalo population was suffering from Bovine Tuberculosis 1. Bovine tuberculosis is a public health problem.



# Animal Human nexus -Zoonosis Challenge

- In Pakistan tuberculosis is prevalent at epidemic proportions, in animals, humans and maybe in the wildlife. According to the present study incidence of bovine tuberculosis is 6.91% in buffaloes and 8.64% in cows.
- According to a rough estimation, 20 % patients of tuberculosis visiting various hospitals of Lahore are suffering from extra pulmonary tuberculosis.
- . 'Test and slaughter' is not feasible under the existing socio-economic conditions of the country. Eradication of tuberculosis from wild reservoirs is almost impossible. The possible way of bringing down the incidence in animals and humans is by adopting some strict and uniform control measures for the animal and human population

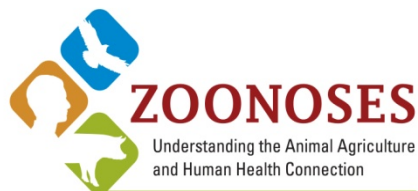


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# Animal Human nexus -Zoonosis Challenge

- The measure may include:
- Public education for their awareness about tuberculosis.
- Mandatory mass scale vaccination of livestock with BCG-bovine strain vaccine in the country.
- Mandatory tuberculin testing of dairy animals, twice a year, and destruction of all tuberculin-positive animals secreting AFB, with full compensation to the owner by the Government.
- Segregation of all tuberculin positive animals.
- Immediate weaning of all calves of tuberculin positive mothers and vaccination.
- Mandatory pasteurization of milk before marketing,
- Mandatory vaccination of human population with BCG vaccine.
- Enactment of proper laws.



# Women's role in Animal Agriculture

- Agricultural and allied industries absorb the largest proportion of employed persons, both women and men, particularly in the rural areas.
- proportion of the persons engaged in the agricultural rural
  - women (79.4%)
  - men (60.8%).

*(According to the 1991-92 Labor Force Survey)*
- Female labor force participation rate
  - 45% in rural areas
  - 17% in the urban areas

*(Pakistan Integrated Household Survey 1990-1991)*
- Woman's participation rate in agriculture 73%
- In agricultural households women
  - account for 25% of all full-time
  - 75% of all part-time workers in.

*(Agricultural census 1980 )*

# Women's role in Animal Agriculture

- A rural woman in Pakistan works approximately 15 hours a day
- Average 6 hours in caring for livestock.
- Responsible for 60% to 80% of the feeding and milking of cattle
- The time spent on livestock by the households vary from region to region

# Women's role in Animal Agriculture

Tasks	Female	Male	Both
Land preparation		x	
Applying manure	x	xx	
Applying fertilizer		x	
Weeding/hoeing			x
Harvesting			x
Husking/threshing	xx	x	
Drying			x
Storing	x	x	
Preparing storage	x	x	
xx/x = relative involvement Source: ESCAP, 1996			





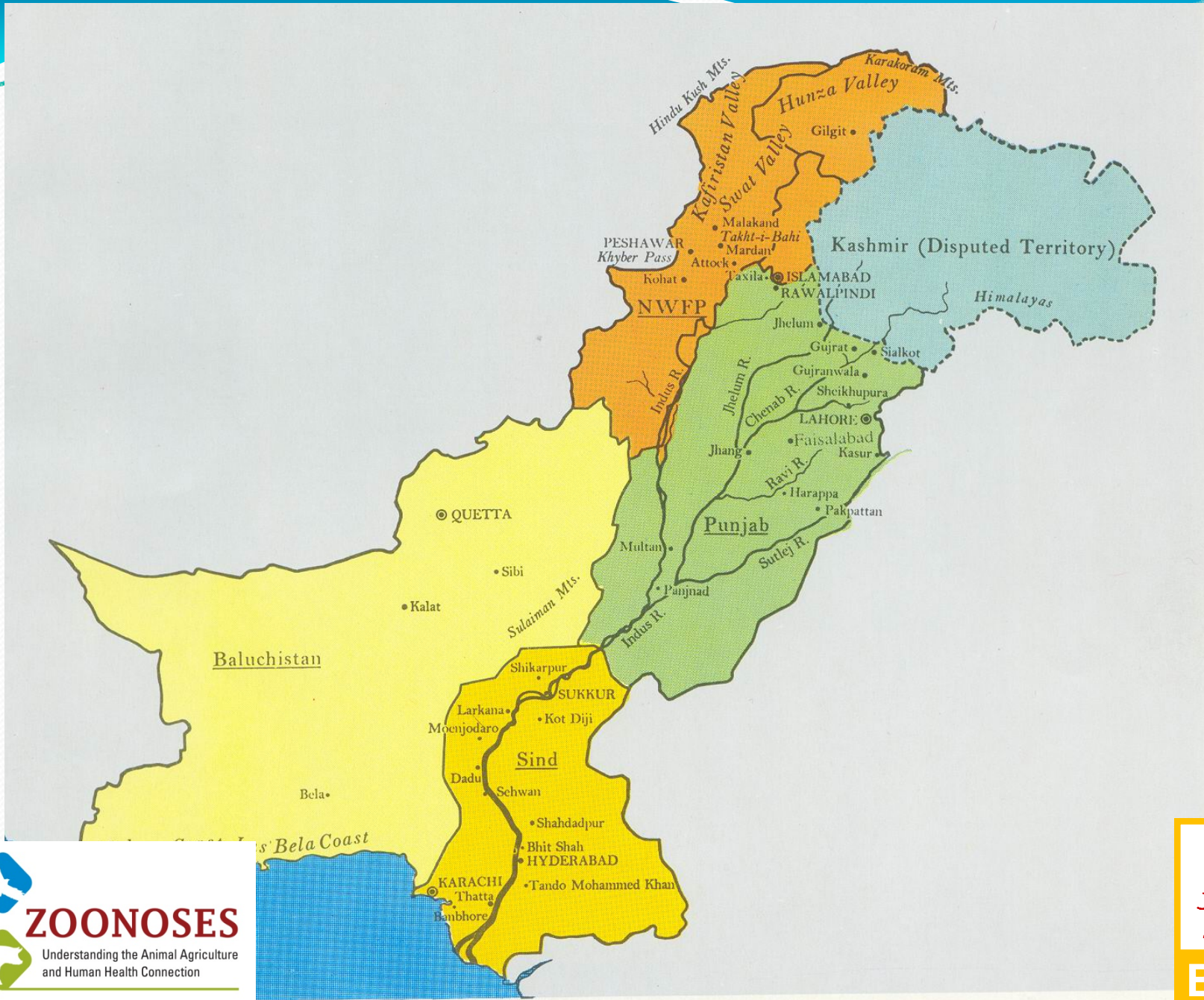


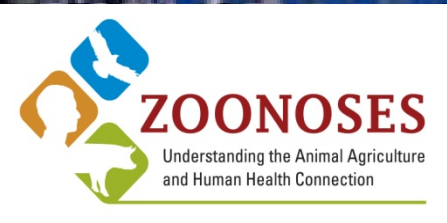











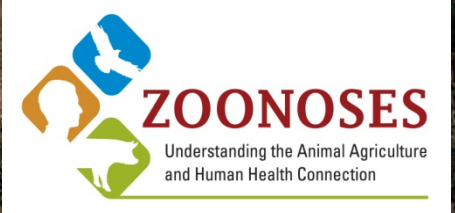
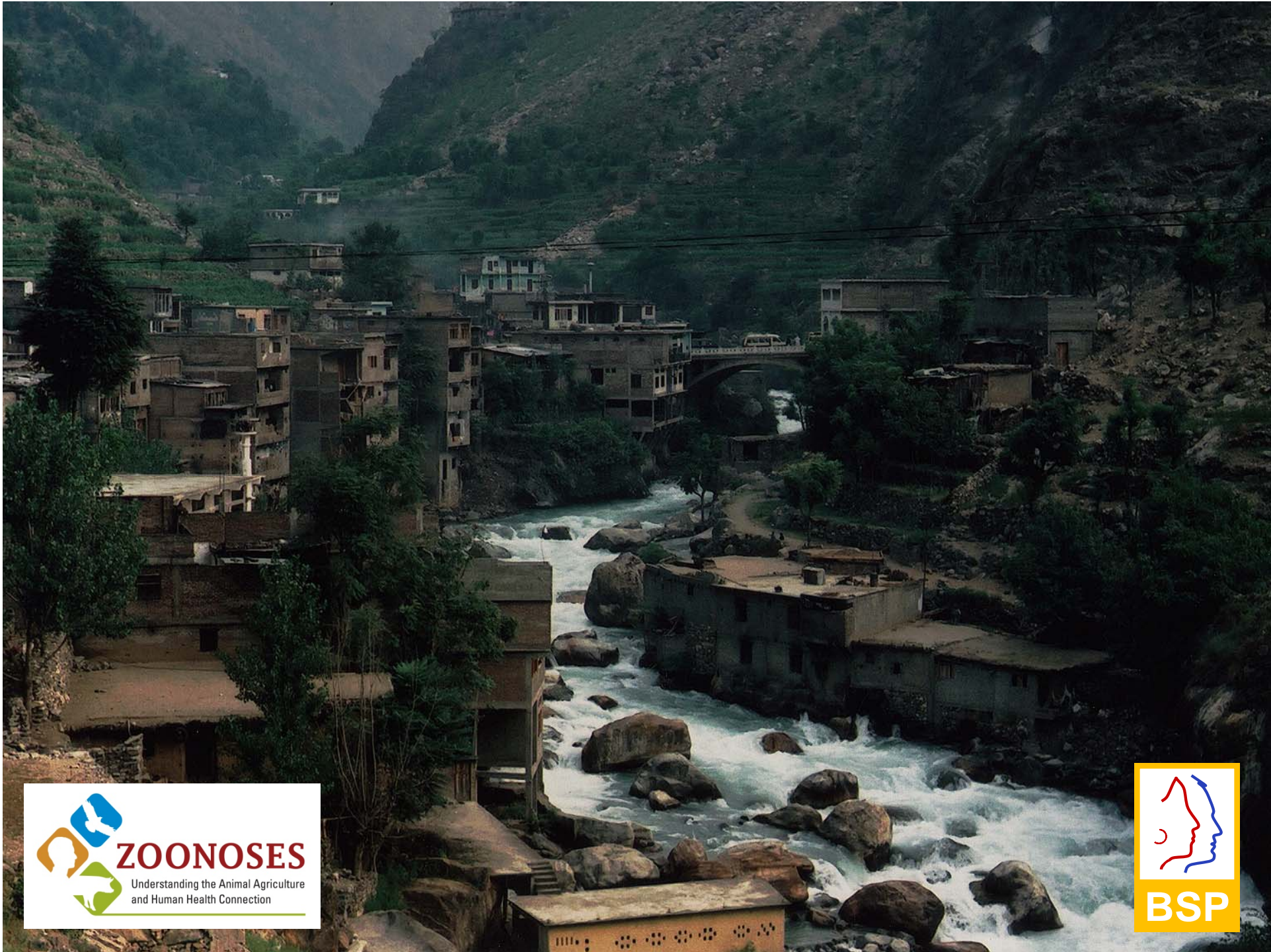




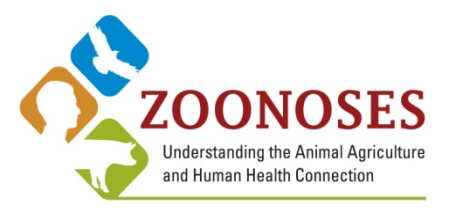
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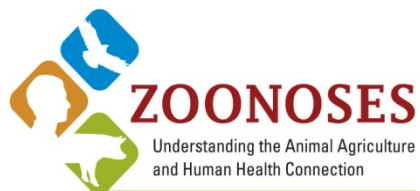


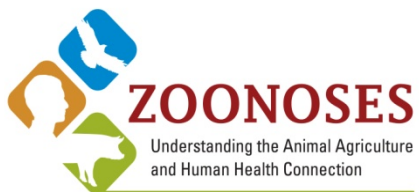
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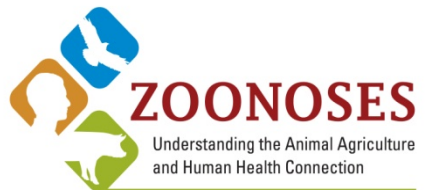
# Situation in Area inundated with flood

CASES	TOTAL
Diarrhea	29
Skin infection	72
Eye infection	13
Skin allergy	66
Fever/body pain	157*
Ear /mouth infection	05
Other G.I.T problems	18
Cough/throat infection	45*
Fungal infection	06
Malaria	14
Injury	04
<b>Total</b>	<b>427</b>

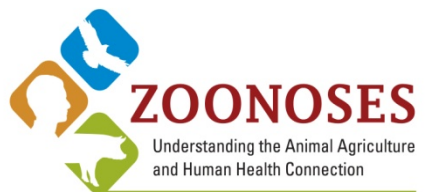
# BSP Response Floods in Pakistan



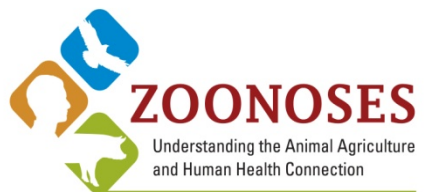


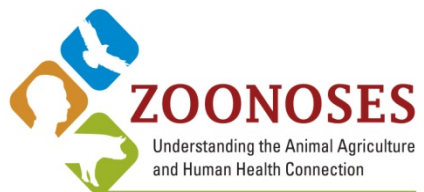


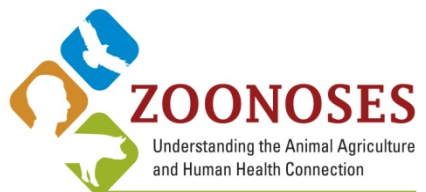




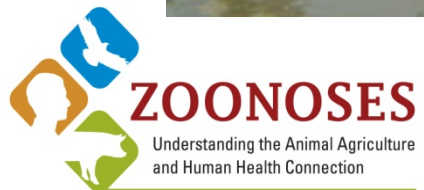




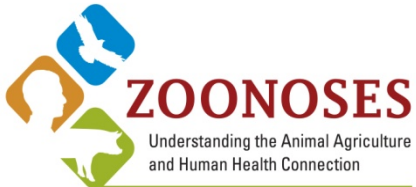


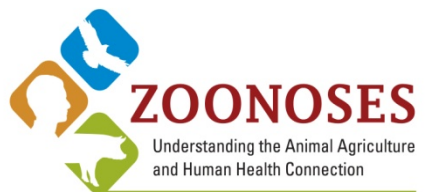




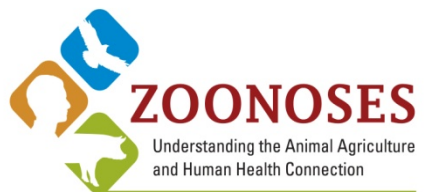


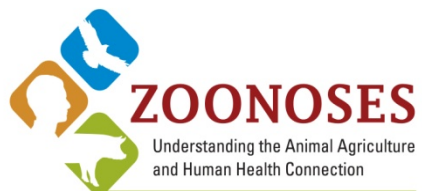


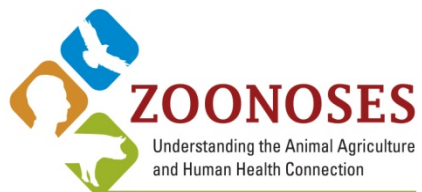


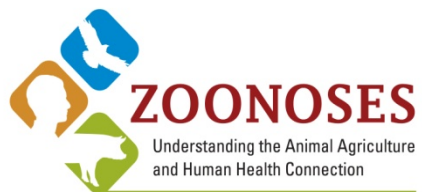


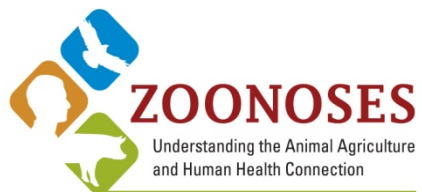






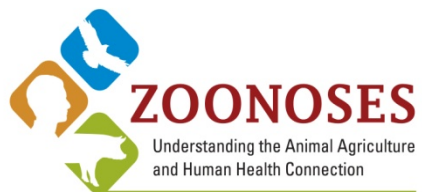




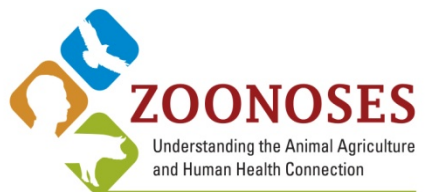


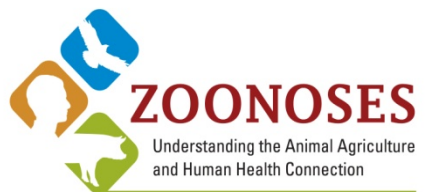


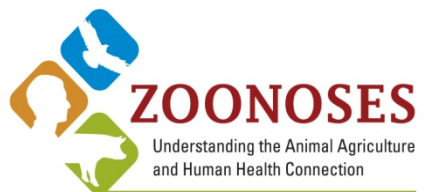


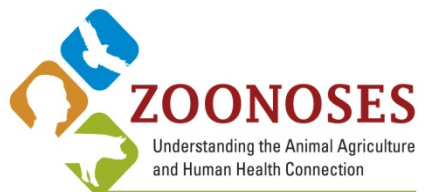




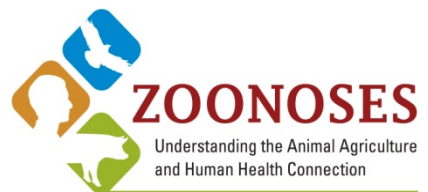














# Thanks you

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