



River dolphins a reflection of river basin health

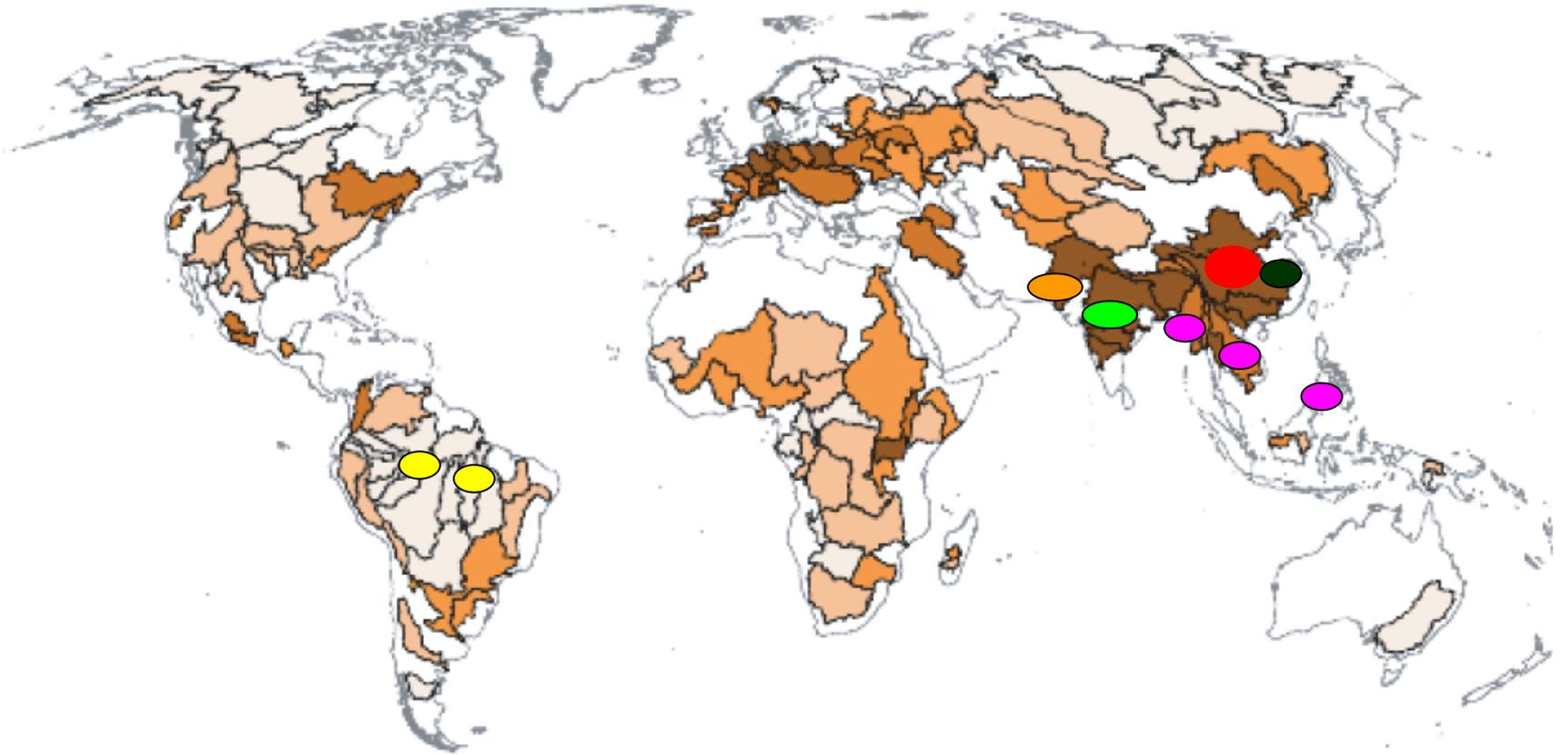


Anna Forslund
WWF
Brisbane River Symposium
2007 08 03



	River basin	Status
Indus River dolphin <i>(Platanista minor)</i>	Indus River	Endangered
Ganges River dolphin <i>(Platanista gangetica)</i>	Ganges Brahmaputra Meghna and Karnaphuli Sangu	Endangered
Yangtze River dolphin <i>(Lipotes vexillifer)</i>	Yangtze River	Extinct?
Finless porpoise <i>(Neophocaena phocaenoides)</i>	Yangtze River	Endangered
Irrawaddy dolphin <i>(Orcaella brevirostis)</i>	Mekong, Mahakam, Ayeyarwaddy Rivers	?, Critical Endangered
Amazon River dolphin <i>(Inia geoffrensis)</i>	Amazon and Orinoco River system	Vulnerable
Tucuxi (<i>Sotalia fluviatilis</i>)	Amazon and Orinoco River system	?

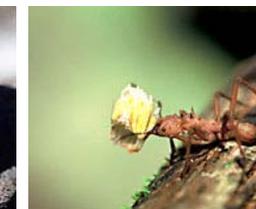
Watersheds of the World - Population Density



People per Square Kilometer

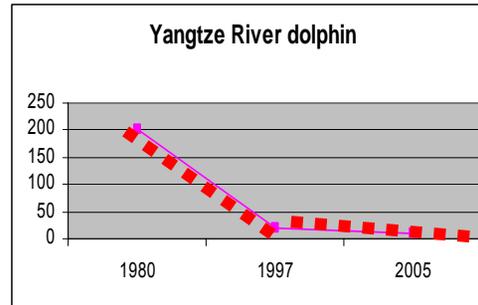
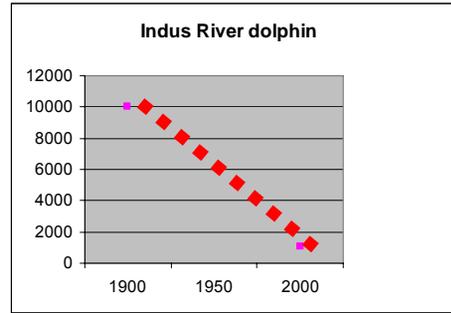


Map Projection: Robinson





Declining populations in Asia





River dolphins in South America





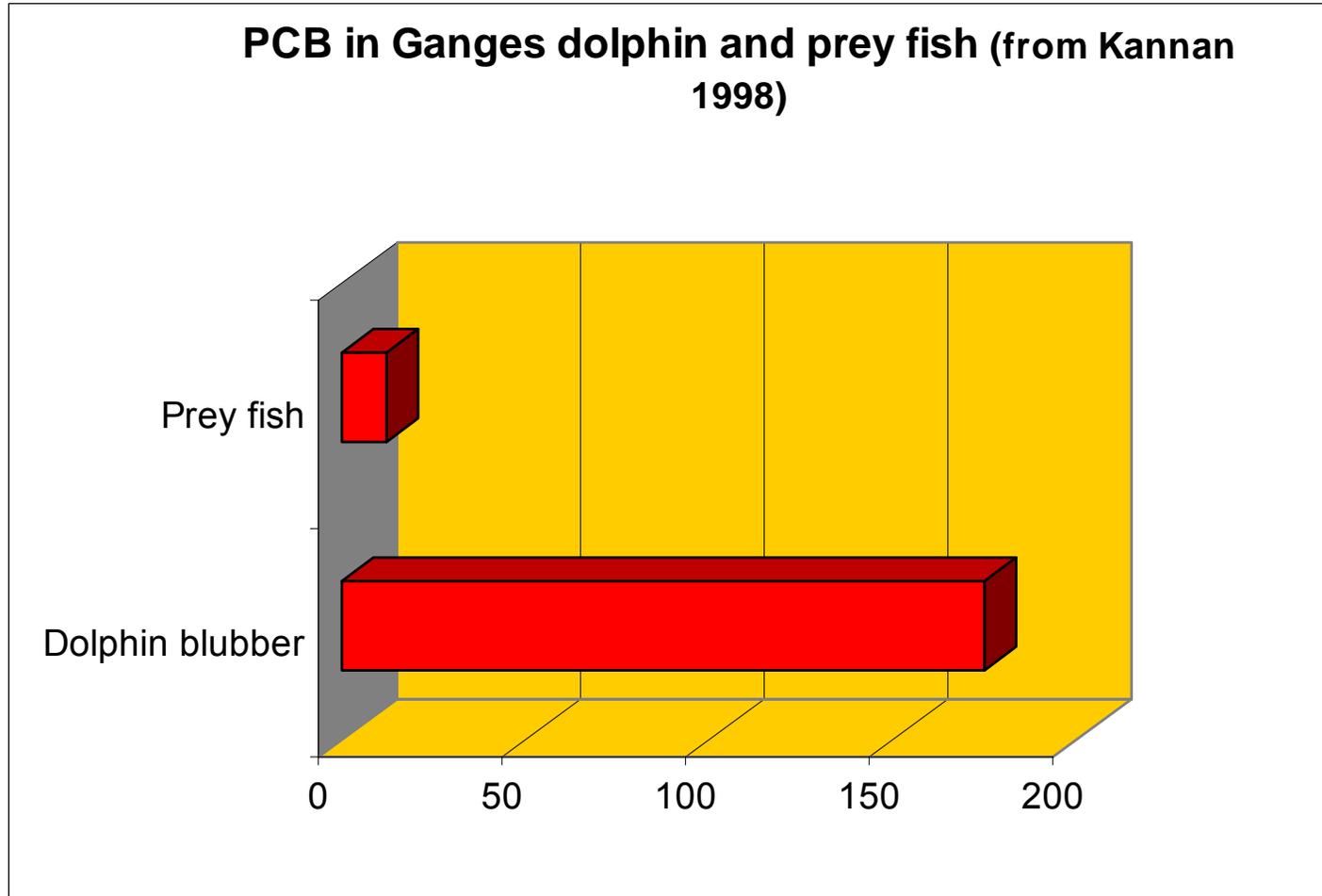
Threats to river basins and river dolphins

1. Pollution
2. Water withdrawal
3. Infrastructure
4. Climate change
5. Over fishing and bycatch
6. Invasive species





Accumulation of toxic substances in Ganges River dolphin

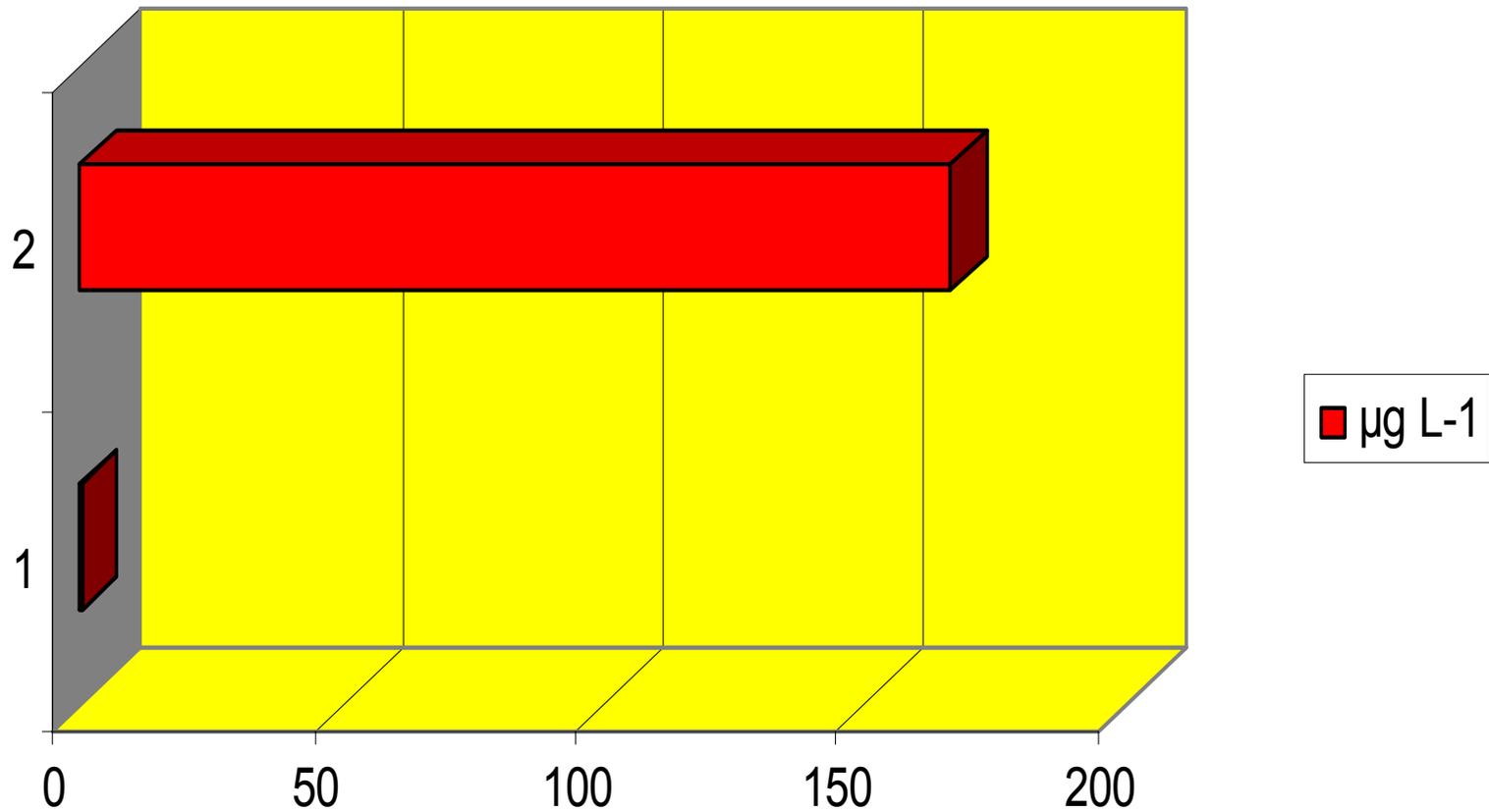




Accumulation in Yangtze finless porpoise

(from Wei- Wei Dong et al 2006)

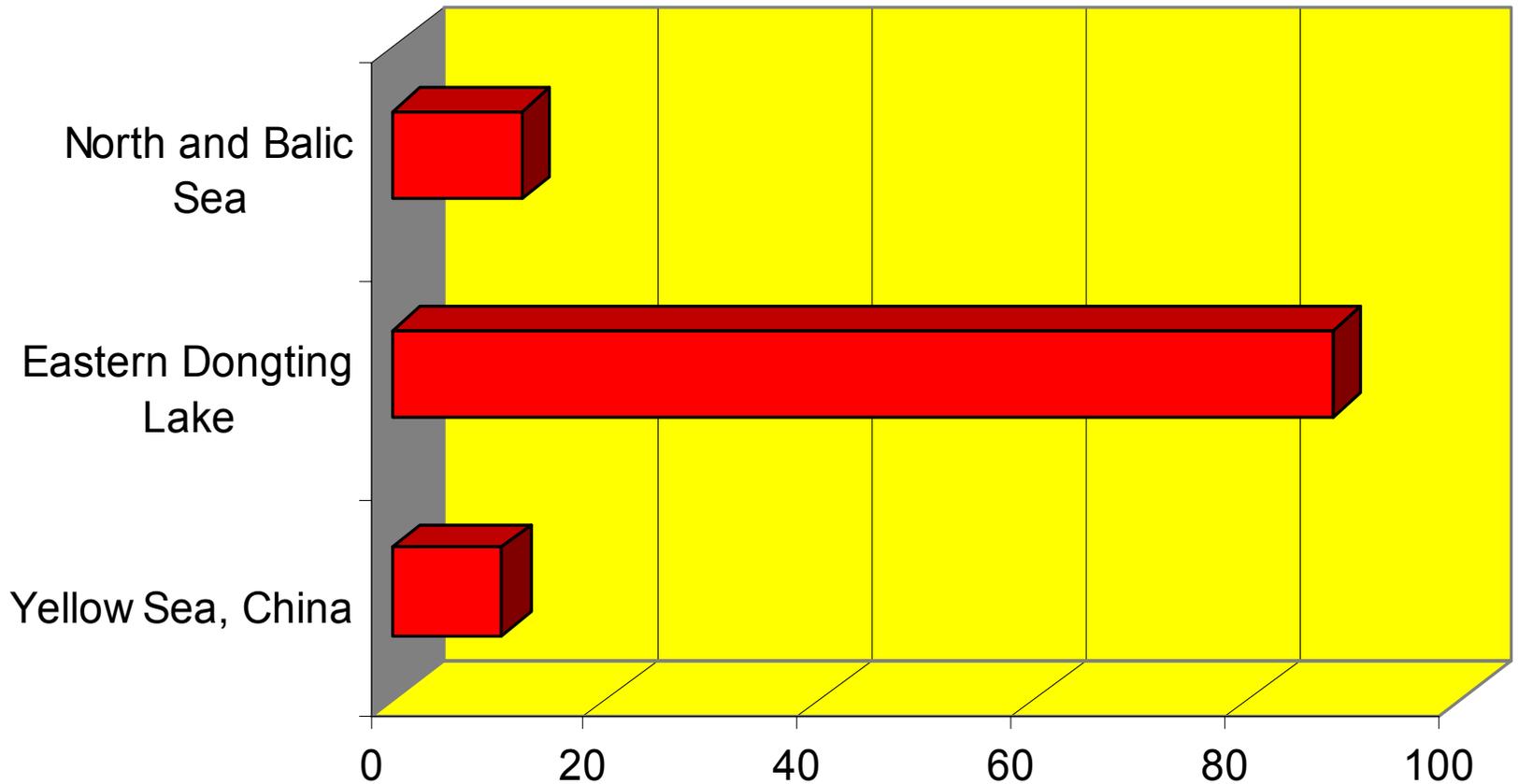
Bioaccumulation of Mercury in Finless porpoise





Comparisons of mercury concentrations in Yangtze finless porpoise in different waters

(from Wei- Wei ding et al 2006)





Summary pollution

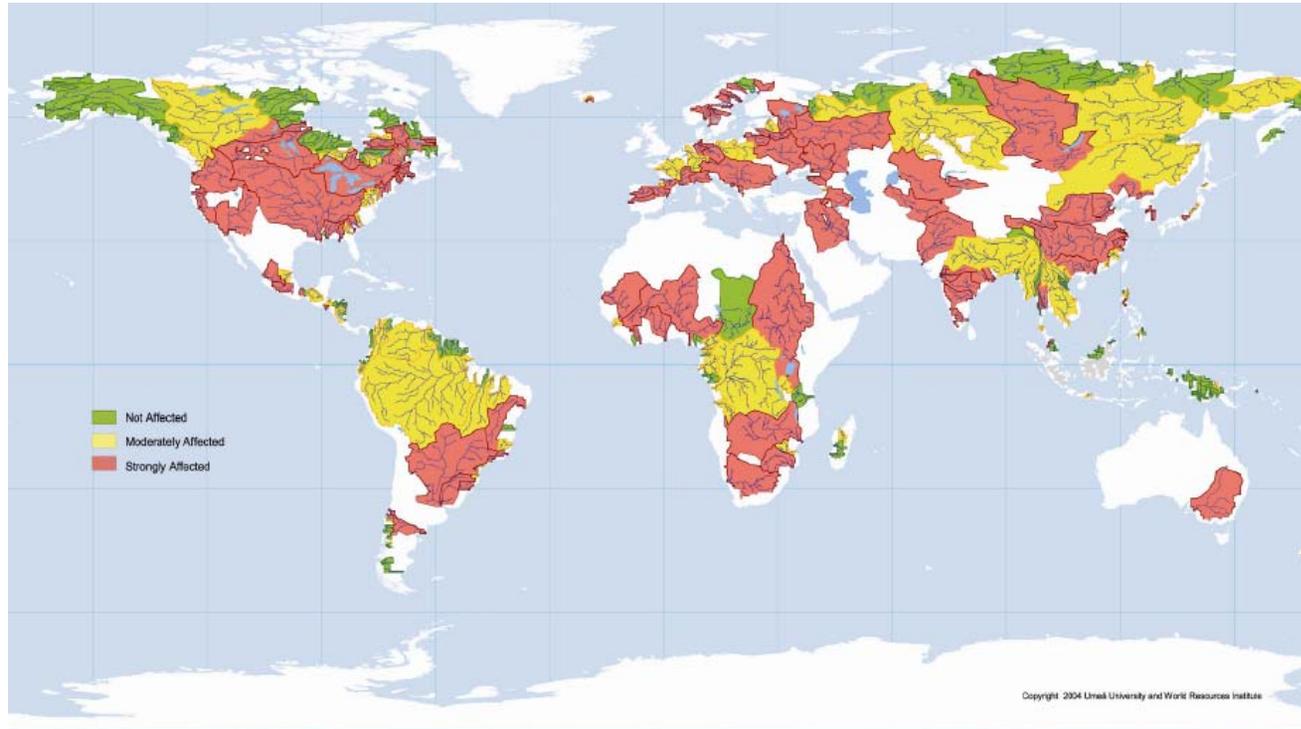
- High bioaccumulation
- Older species higher amounts
- The toxic substance is transferred between mother and calf (high levels in calves)
- Generally higher levels in freshwater species

River dolphins – reliable indicators for pollution





River fragmentation



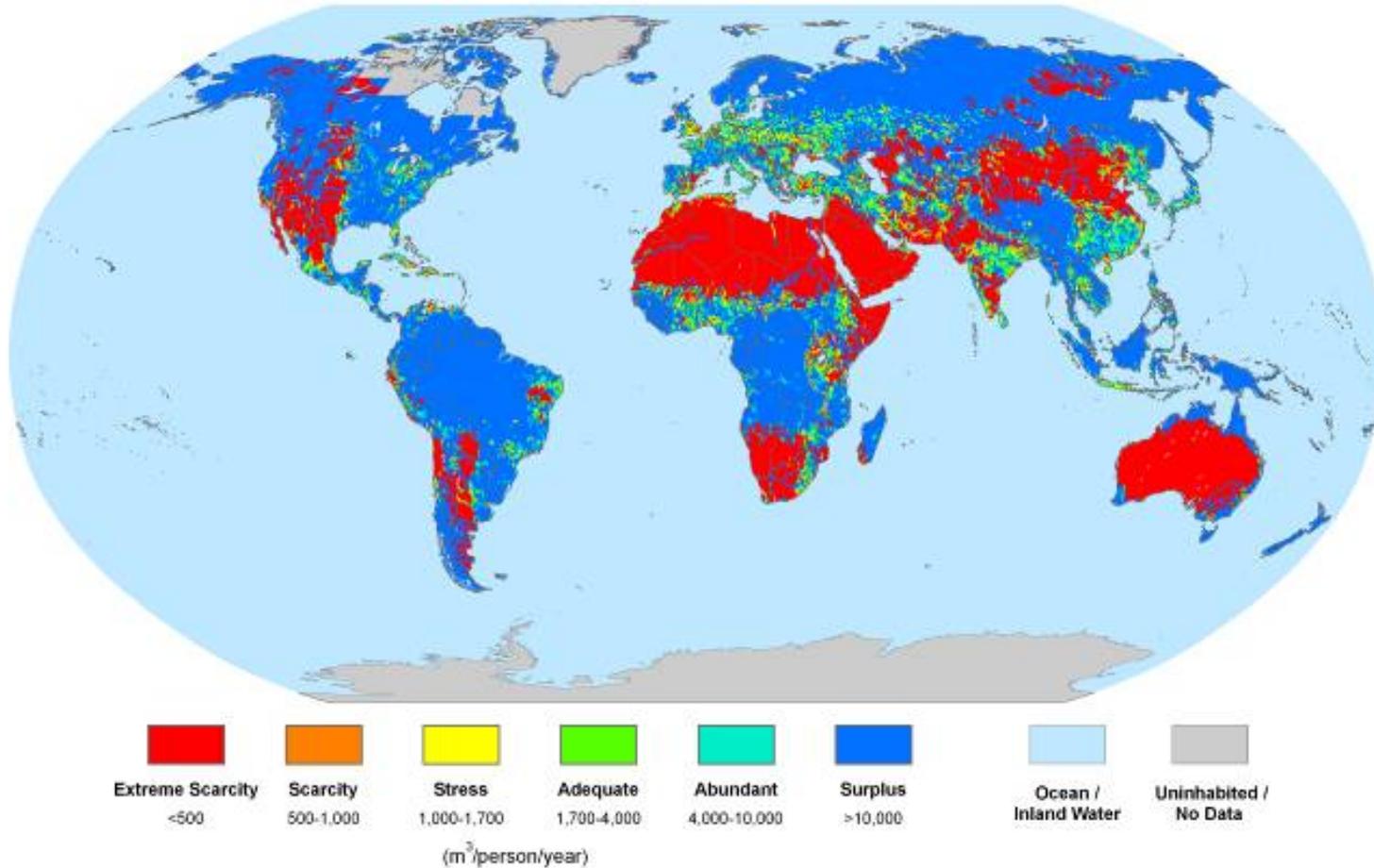
STOCKHOLM INTERNATIONAL WATER INSTITUTE





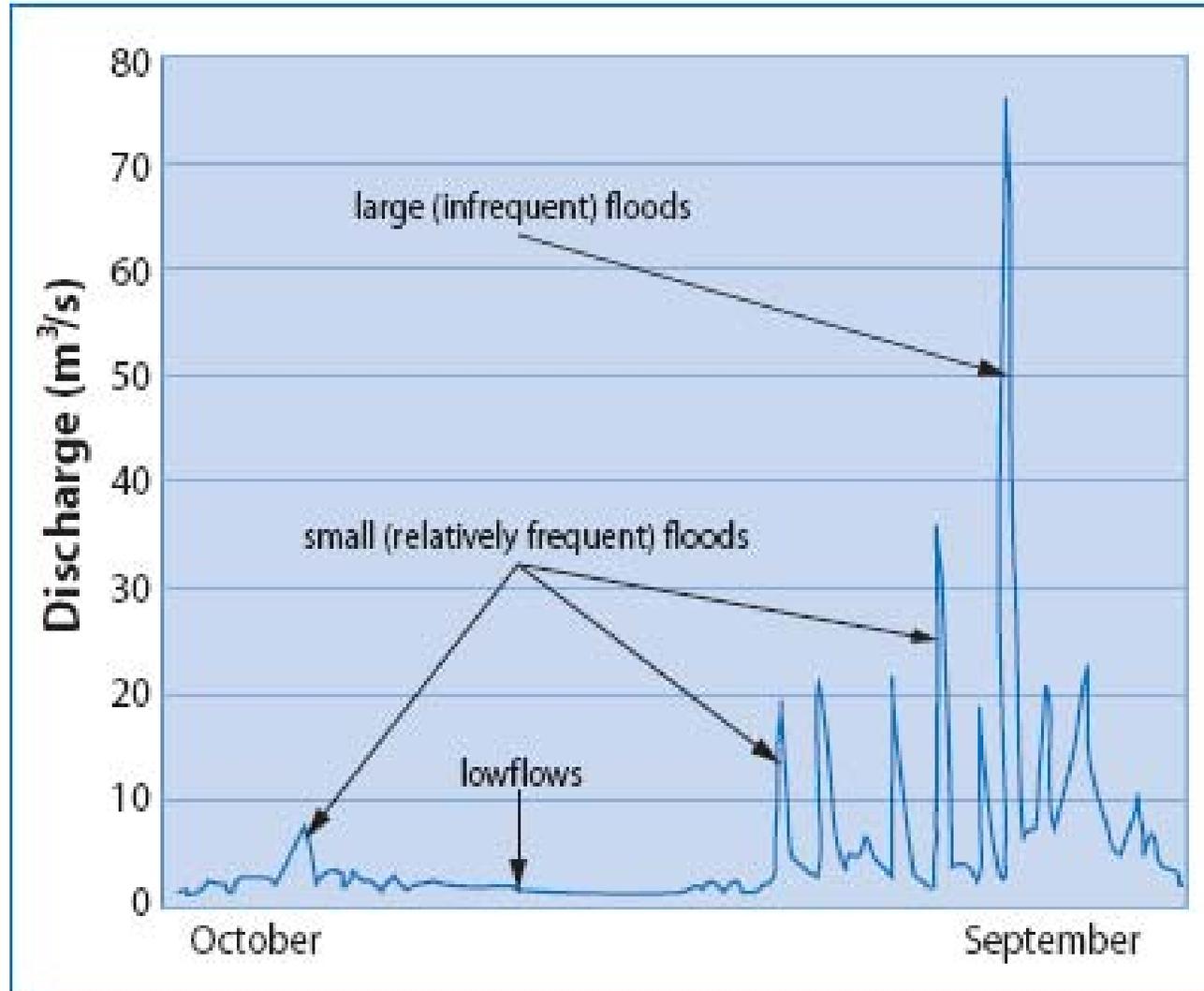
Water withdrawal

Annual Renewable Freshwater Supply Per Capita (ca. 2000)





River dolphins and the flow regime



**Still a chance for the river
dolphins?**





Conservation action needed on;

1. River basin, regional and global scale

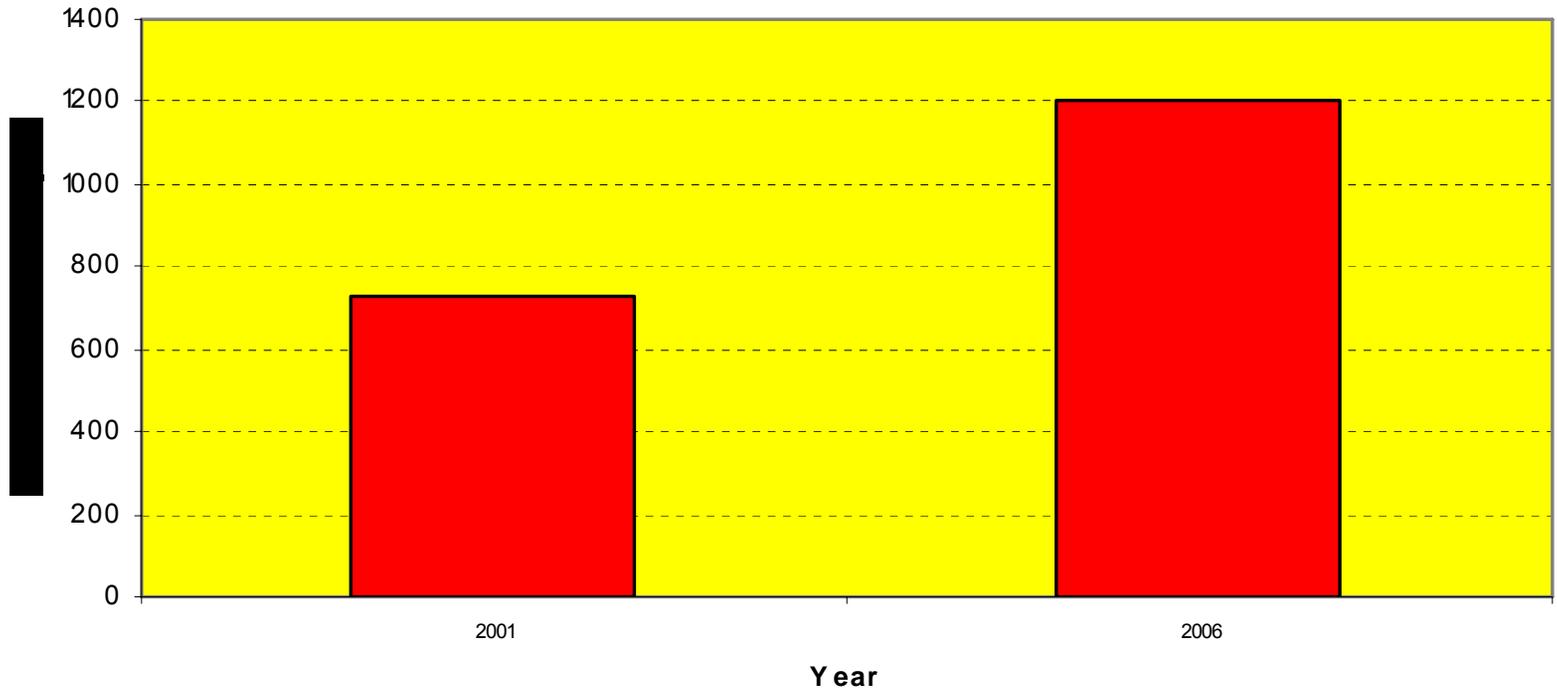
- Securing environmental flows
- IWRM approach
- Strengthen legal frameworks such as UN Water courses convention

2. Concentrated efforts in hot spots areas

- Reducing threats caused by infrastructure and water withdrawal
- Protecting and improving habitats
- Reducing threat from bycatch and overfishing
- Adequate protection
- Research
- Increased awareness

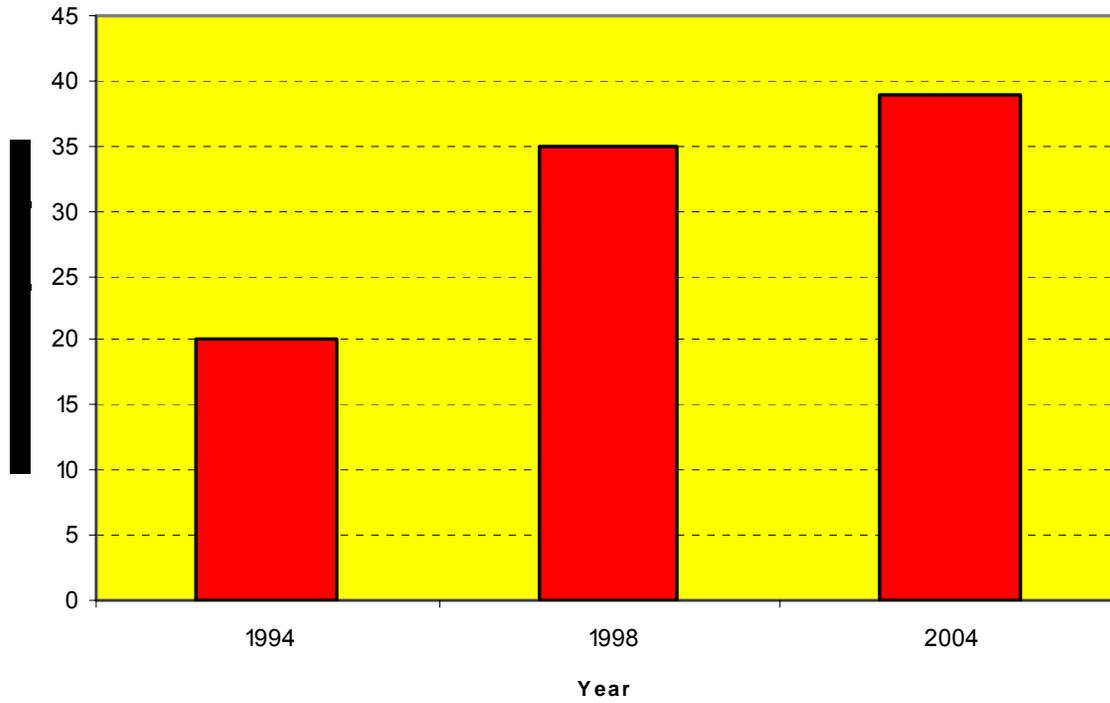


Indus River Dolphin Guddu Barrage and Sukkur Barrage





Ganges River dolphin Bijnor to Narora





***Myth told by a Hindu priest at a temple near the banks of the
Karnali River, Nepal:***

“In the time of the ancients there was a benevolent king named Bhagirath. The King prayed to Lord Shiva for a thousand years to bring a great river to his people. When Shiva was satisfied with the King's devotion, he created a wondrous life-giving river from his long flowing hair. To spread the news that the river was coming, Shiva also made the dolphin Susu and gave him the name Bhagirath, after the King who brought the river to the people of Nepal. As the messenger king, the dolphin became husband to the river. This sacred bond between dolphin and river cannot be broken. Without a husband there can be no wife. Without the messenger king, who will carry the story of the river?”



Thank you!