



北京大学

自然保护与
社会发展研究中心

PEKING UNIVERSITY CENTER FOR NATURE AND SOCIETY



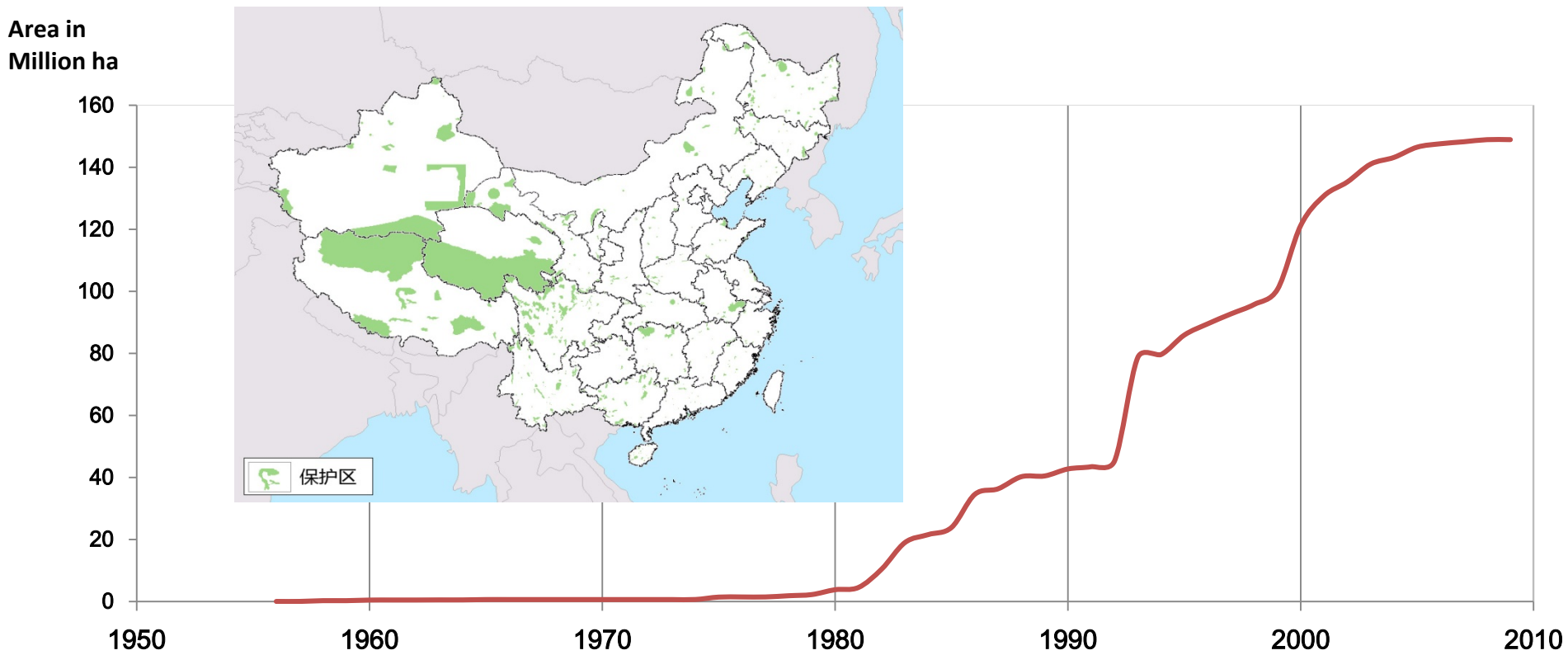
SHAN SHUI

Monitoring, outcome assessment and adaptive management of protected areas, cases from China

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The outcomes of protected Areas need to be measured

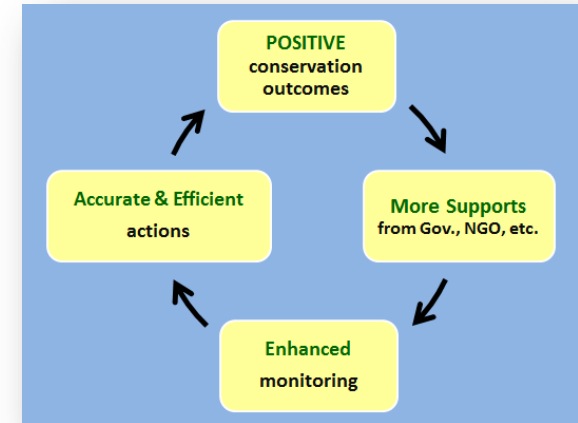


- ❑ China has 2,669 nature reserves, occupied 152.0 m ha, 14.9% of terrestrial area, by the end of 2012.
- ❑ 2.1% to reach AiChi 11

Outcome Evaluation Begins

2009-2013 First National PA management Evaluation Outcome Score is less than 20%

From 2010 to 2011, we interviewed 56 nature reserves China wide, made suggestions that **PAs' outcomes can be and should be evaluated.**



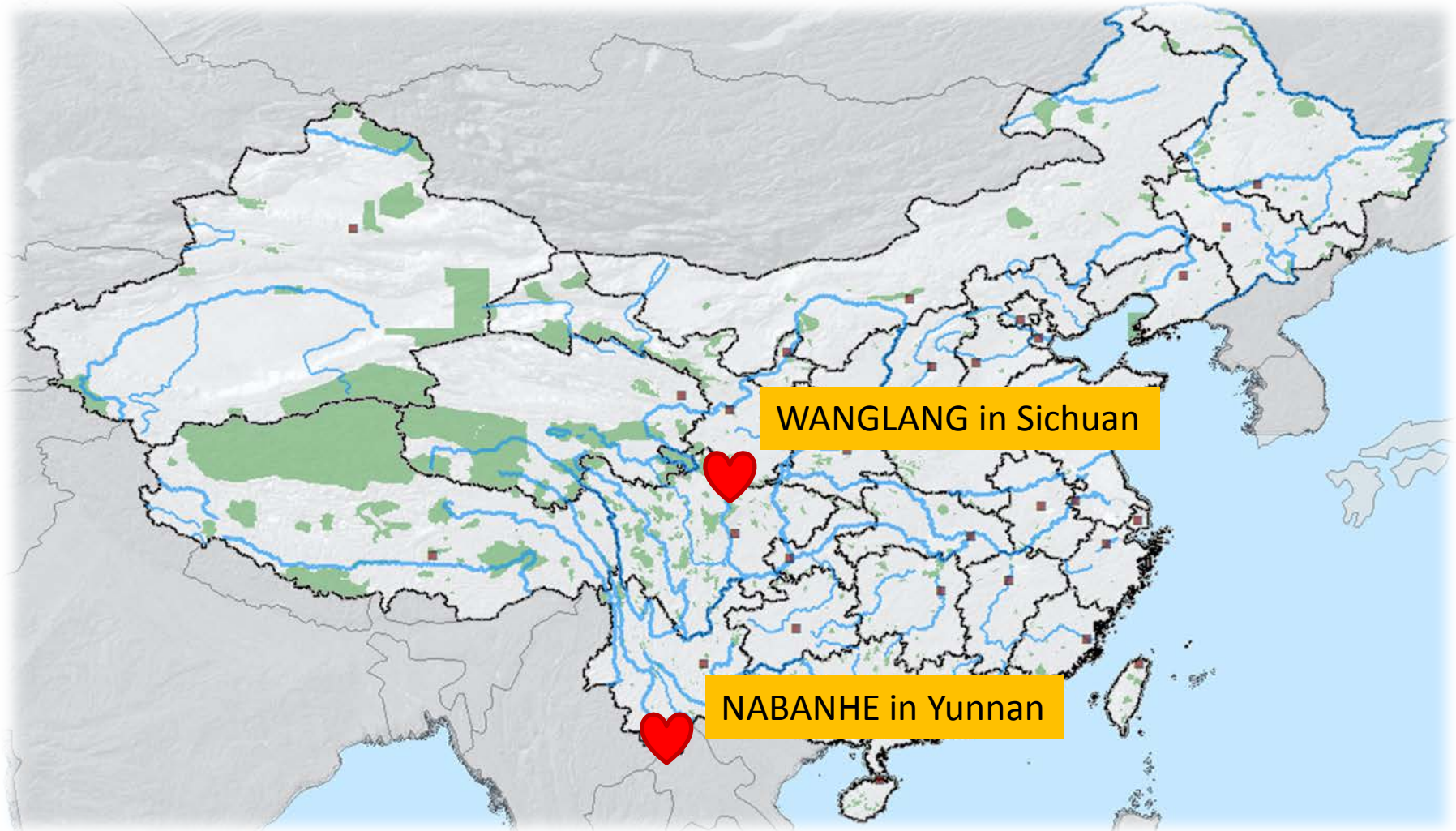
Prov.	Num. of Nature Reserve	Name of Nature Reserve
Hunan	5	Dongdongting NR, Bamianshan NR, Taoyuandong NR, Mangshan NR, Xidongtinghu NR
Sichuan	6	Baishuihe NR, Gexigou NR, Wolong NR, Longxi-Hongkou NR, Guanwushan NR, Gonggashan NR
Zhejiang	5	Longwangshan NR, Qingliangfeng NR, Gutianshan NR, Wangdongyang NR, Fengyangshan NR
Shanghai	1	Chongming Dongtan NR
Hainan	6	Wuzhishan NR, Yinggeling NR, Bangxi NR, Dongzhaigang NR, Dazhoudao NR, Tongguling NR
Guizhou	9	Chishuisuoluo NR, Leigongshan NR, Caohai NR, Maolan NR, Fanjingshan NR, Mayanghe NR, Kuankuoshui NR, Xishui NR, Changjiang Fish NR(Guizhou)
Qinghai	1(3)	Sanjiangyuan NR(3 Parts)
Heilongjiang	3	Xingkaihu NR, Sanjiang NR, Honghe NR
Jilin	2	Changbaishan NR, Hunchun NR
Liaoning	1	Shuangtai hekou NR
Yunnan	2	Huanglianshan NR, Guanyinshan NR
Shaanxi	2	Changqing NR, Tianhuashan NR
Xizang	2	Lasa Lalu Wetland NR, Yaluzangbu Zhongyou hegu NR
Guangdong	3	Chebaling NR, Nanling NR, Zhanjiang NR
Guangxi	6	Chongzuo NR, Shiwandashan NR, Bailunhekou NR, Sanniangwan, Hepu NR, Shankou NR



2014 New National PA management Evaluation Standard (Draft):
Outcome Score Increased to 56%

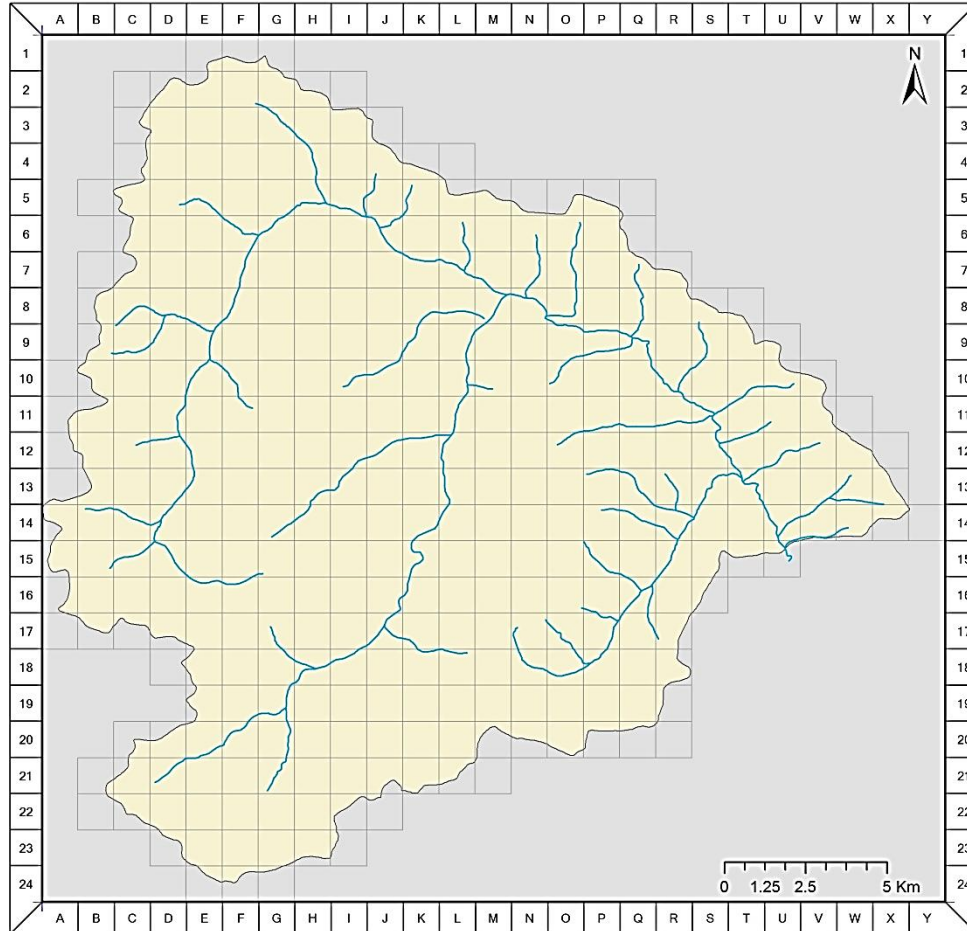
2 Model Protected Area Selected

To try a new model: **Management Unit**

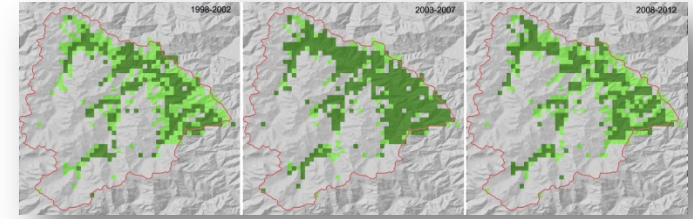


Management Units

Container for SPR (State-Pressure-Response)



(R)



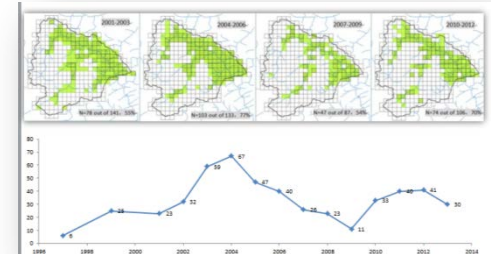
Evaluating monitoring coverage over time

(S&R)

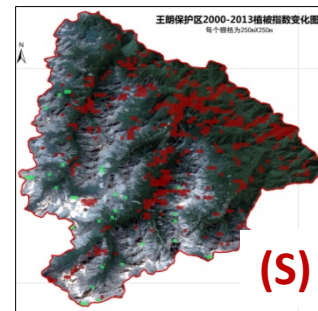


Locating Key Units with Rich Biodiversity

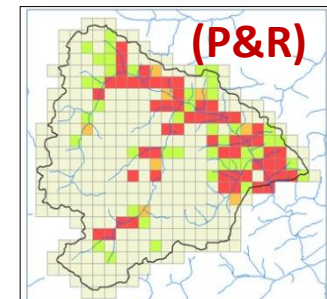
(S)



Monitoring panda distribution changes



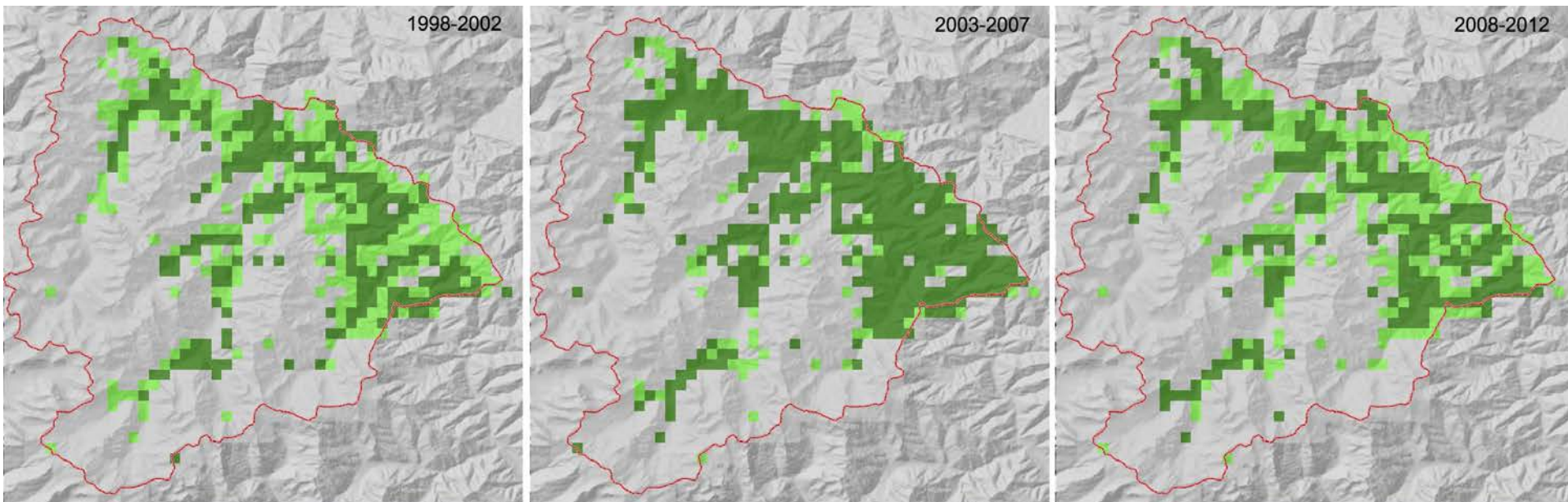
(S)



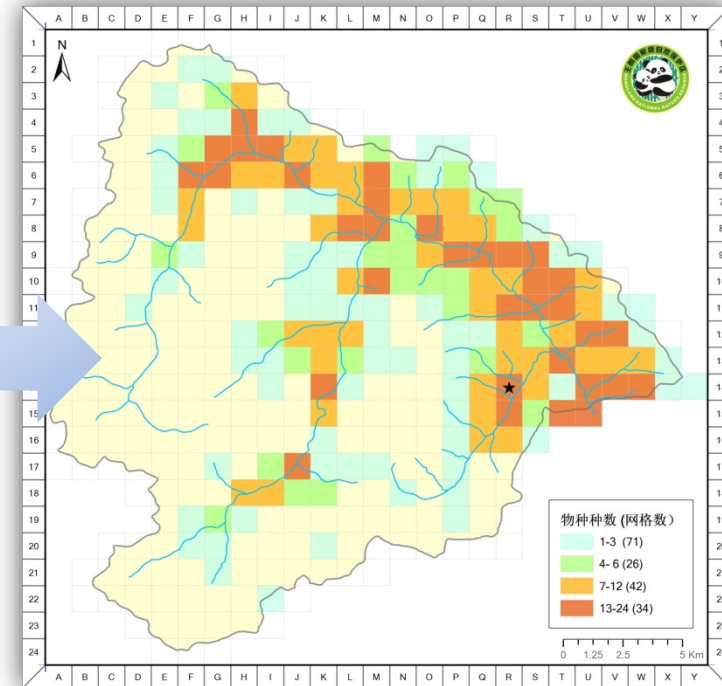
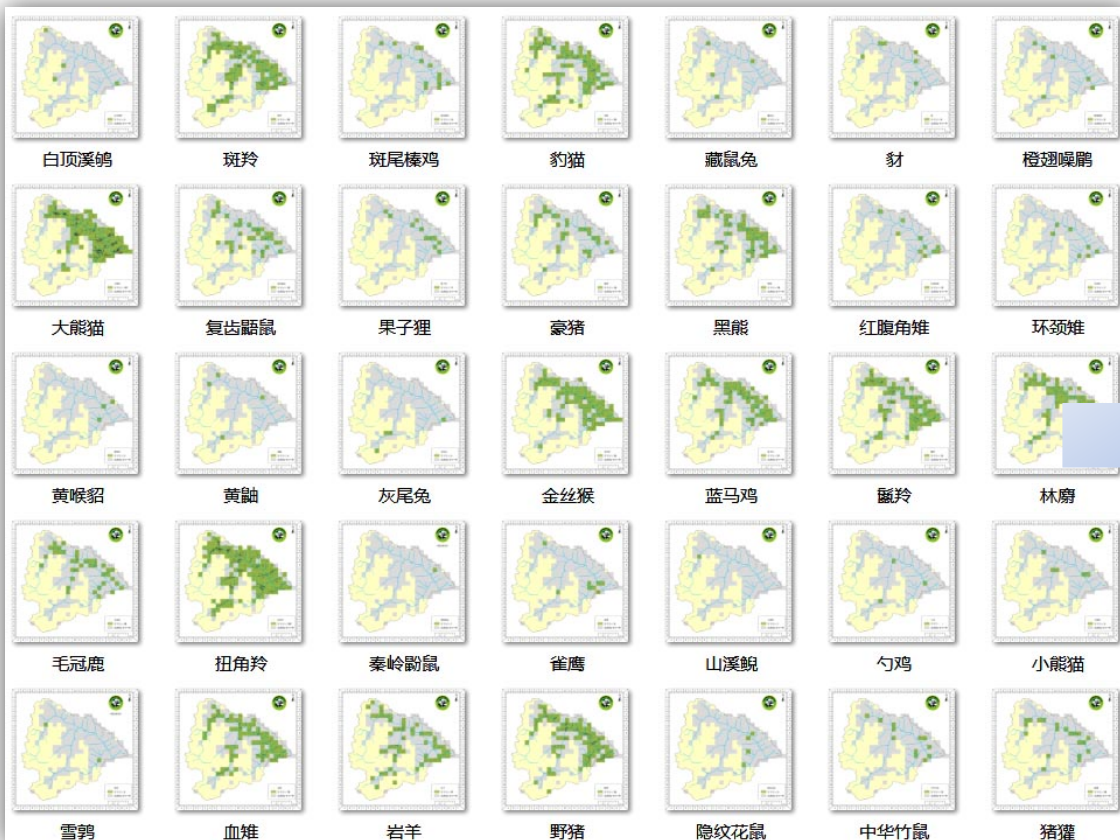
(P&R)

And More

Evaluating monitoring coverage over time

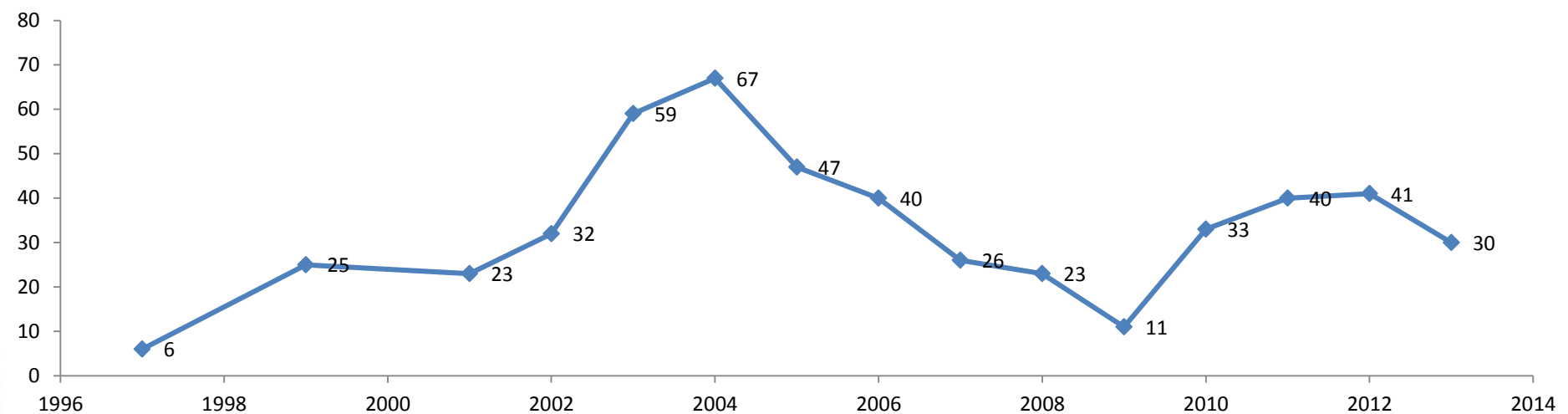
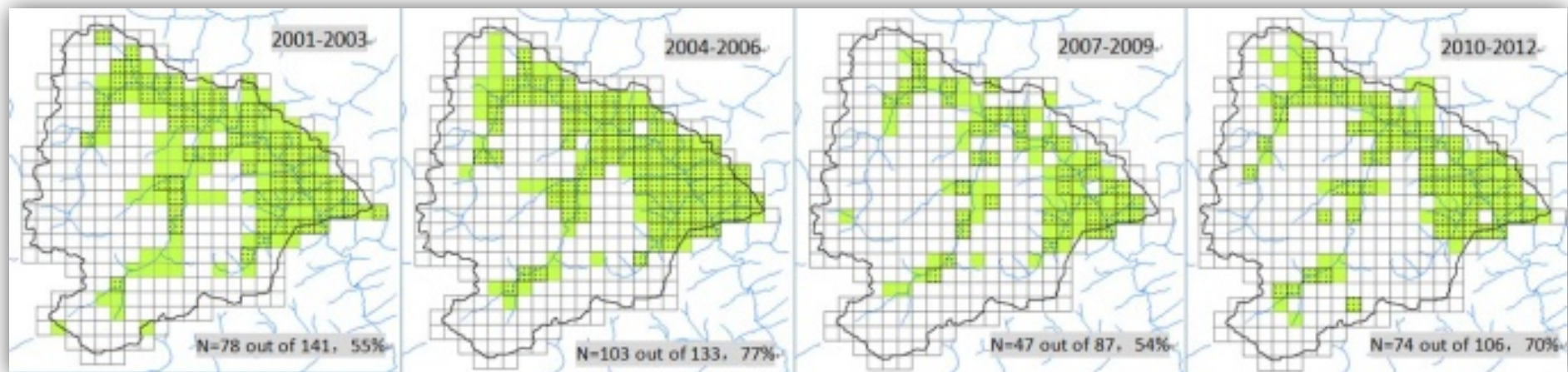


Locating Key Units with Rich Biodiversity



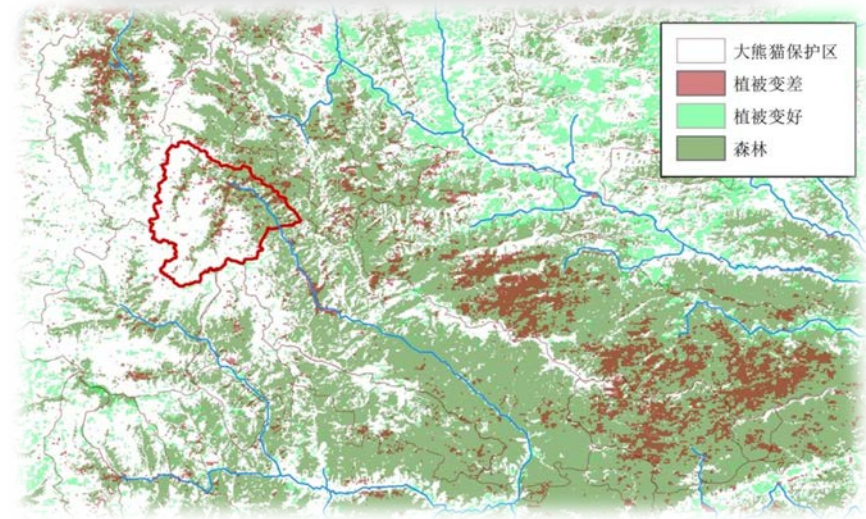
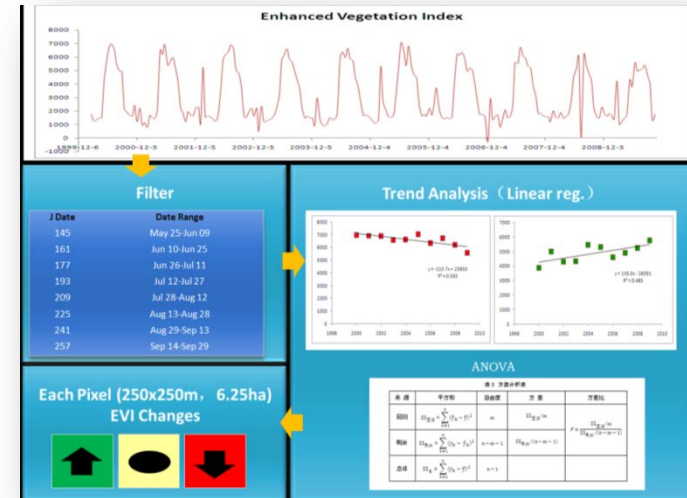
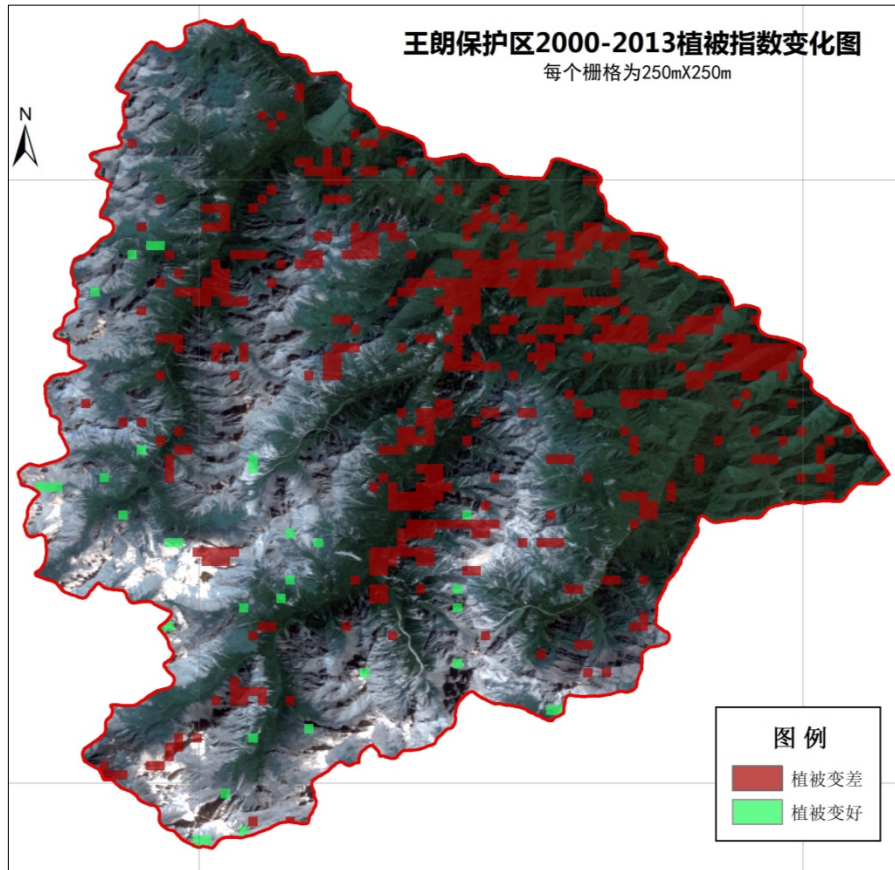
Panda population is stable (S)

Monitoring Species distribution changes over time

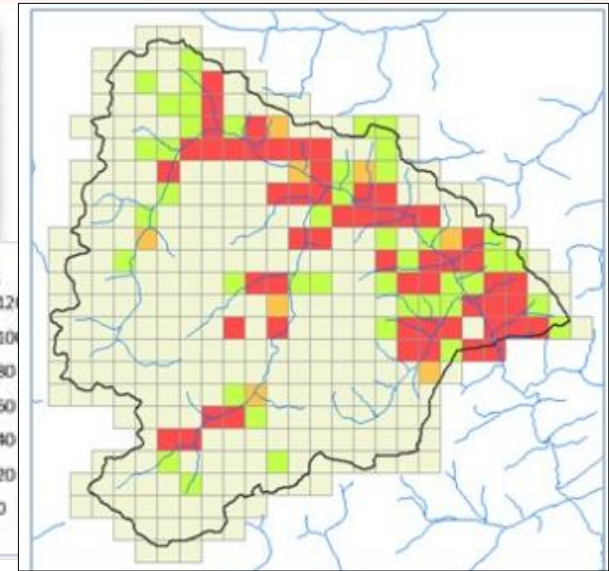
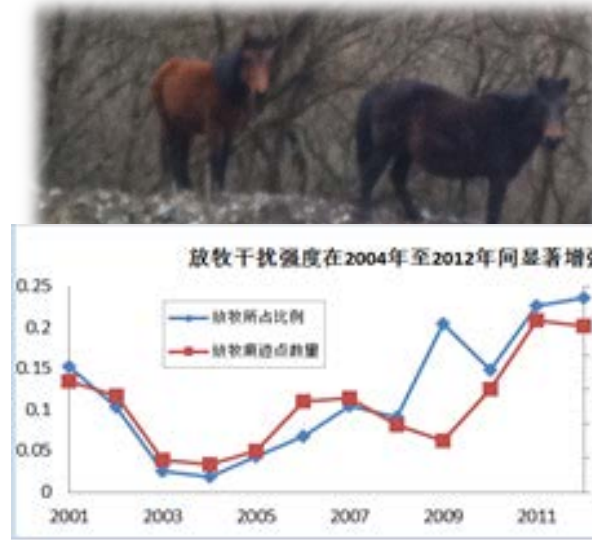
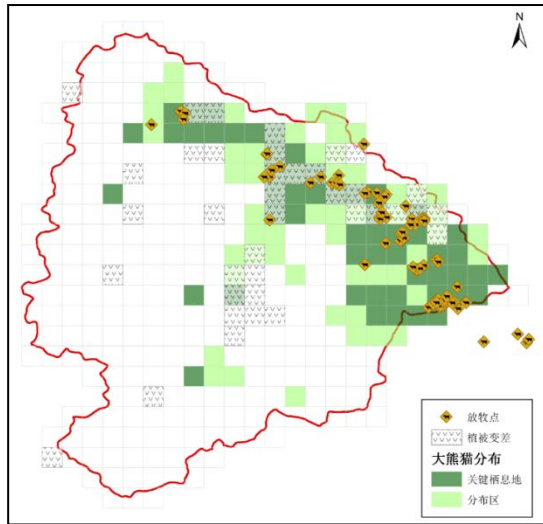


Monitoring habitat changes (S)

EVI of forest is getting down



Livestock in PA is increasing (P)



Year	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Count	5	1	7	1	34	63	108	136	85	76	54	43	20	49	66	80	28
行标签	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
E104025N32995	4			5					2	1				2	23	11	1
E104045N33000						1	2	1	1	9		3	1		18	4	1
E104120N32915						2		14	9	34	2	7		2	17	10	3
E104050N32995								1							15	2	4
E104045N32995			1		1	9	3	4		2		1		1	13	11	1
E104030N32995	8		1		1									2	10	13	3
E104110N32960							3	6	7	10	2	2		2	8	1	
E104070N32950					2	8	1	3	6	7	2	5	2	1	8	1	6
E104100N32960						1									7	12	3