


中国空间技术减灾应用与HJ-1-A/B卫星介绍

Introduction on Space Technology Application for Disaster Reduction and HJ-1-A/B satellites in China

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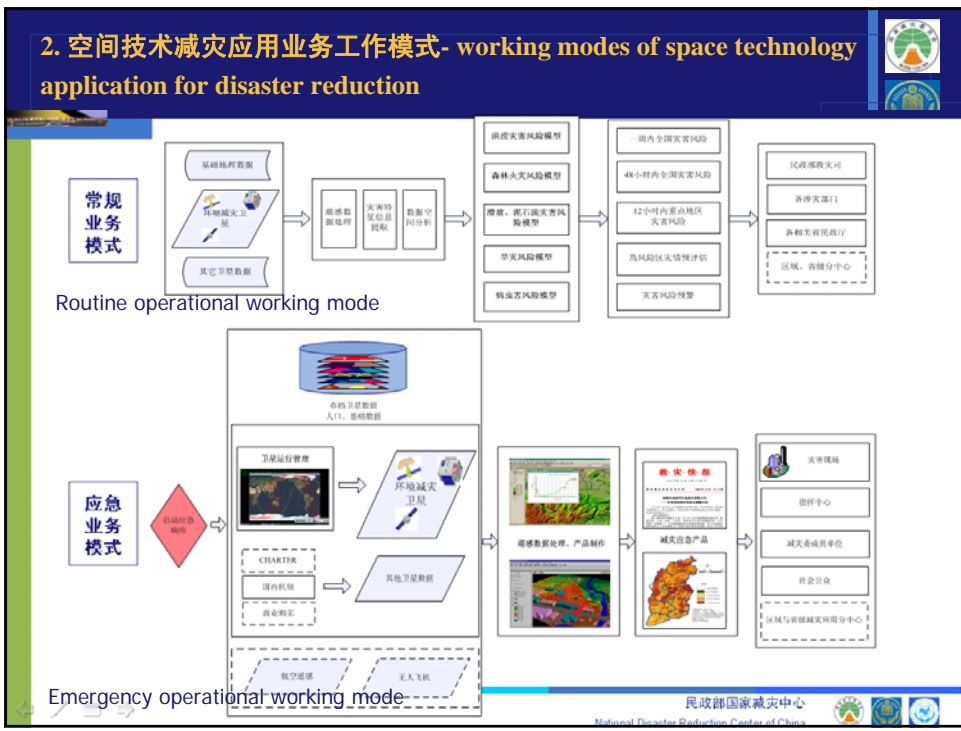
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民政部国家减灾中心
National Disaster Reduction Center of China

1. 机构情况-National Disaster Reduction Center of China (NDRCC)

- ❖ 国家减灾中心于2002年4月批准成立，2003年6月正式组建，2009年2月，在此基础上，加挂卫星减灾应用中心。中心主要承担减灾救灾的政策法规、信息管理、灾害与风险评估、科技开发、宣传培训、国际交流、环境减灾卫星的运行管理和应用等职能，为国家减灾救灾提供信息服务、技术支持和辅助决策建议。
- ❖ National Disaster Reduction Center of China (NDRCC) was approved by State Council in 2002 and formally established in 2003, whose mission is to enhance national disaster management capacity by providing information, technology and consultant services for national disaster management. In 2009, Satellite Disaster Reduction Application Center (SDRAC) was joined into NDRCC. HJ satellites management and application were being added to the responsibilities of NDRCC .

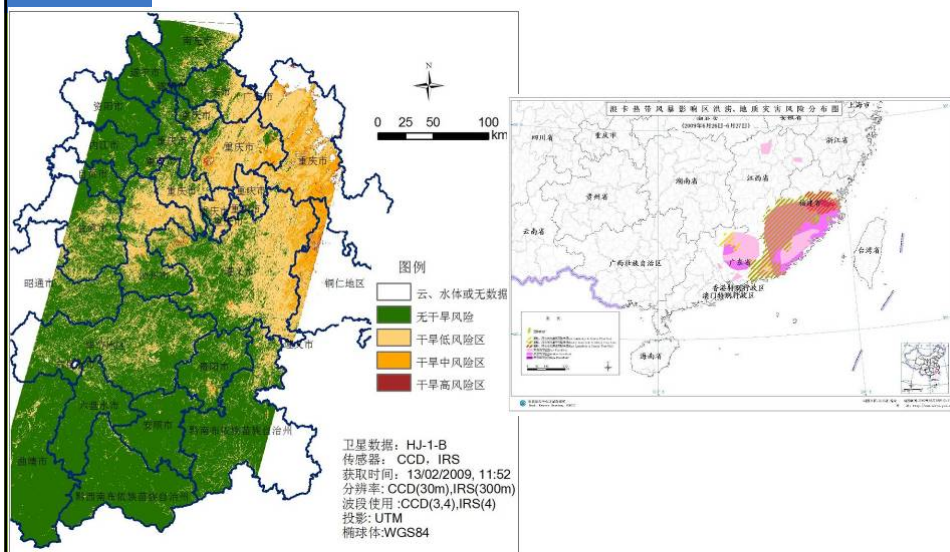
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3、产品体系 Products System

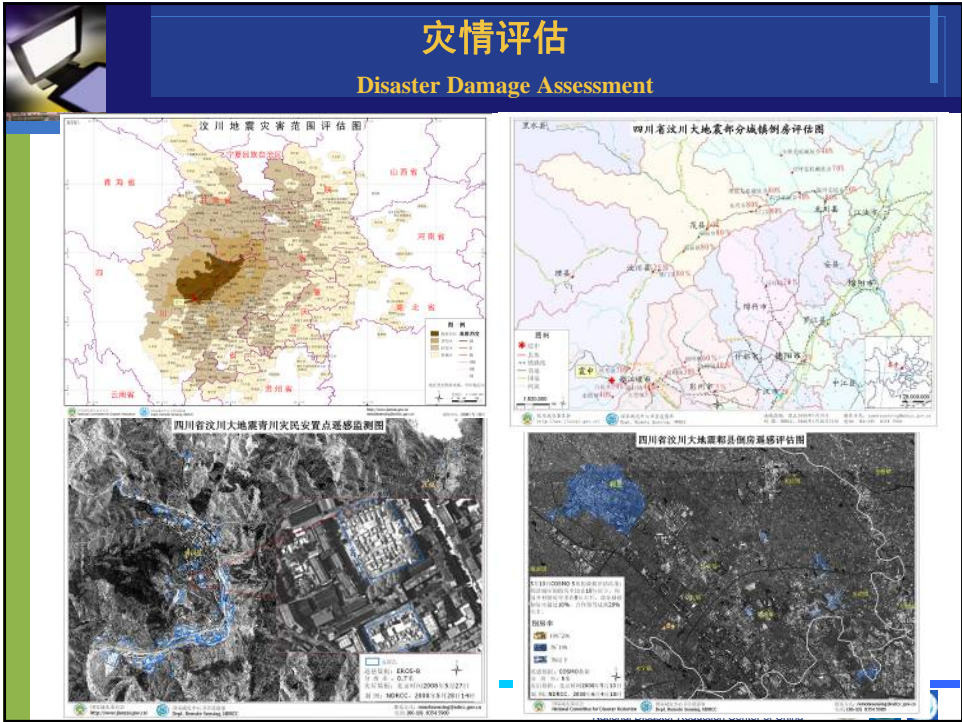
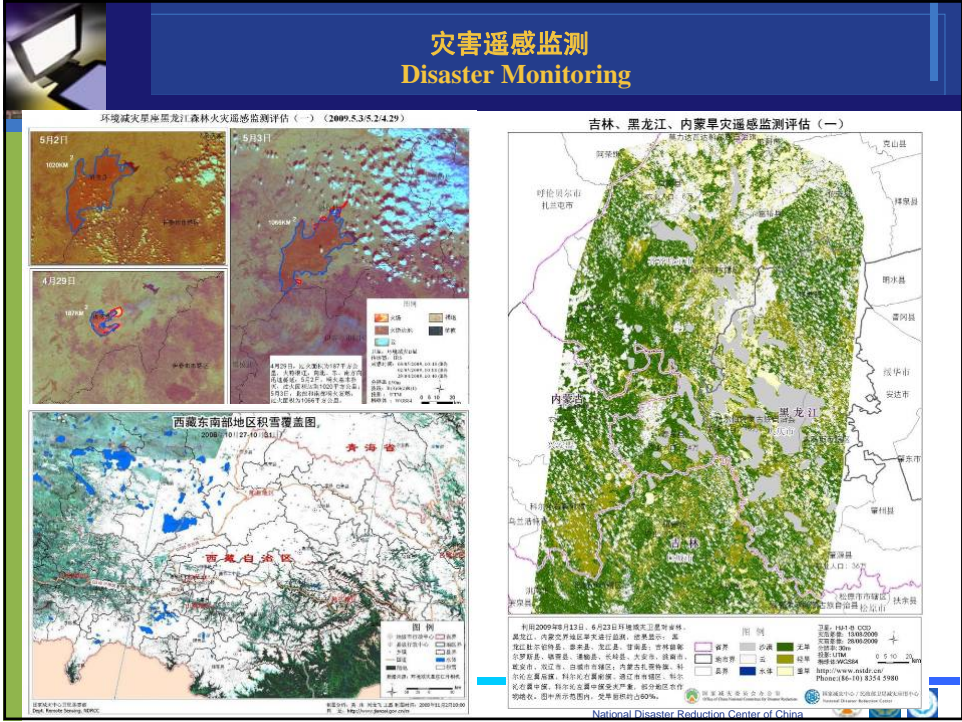


灾害风险评估与预警 Disaster Risk Assessment and Early Warning



民政部国家减灾中心
National Disaster Reduction Center of China







二、环境与灾害监测预报小卫星星座 Small Satellite Constellation for Environment and Disaster Monitoring and Forecasting

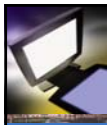








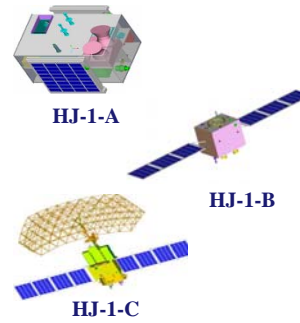


星座计划-Constellation Construction Plan

2008年9月，中国已经发射了2颗光学环境减灾卫星，计划2011年发射1颗合成孔径雷达减灾卫星，最终计划是由4颗光学卫星和4颗合成孔径雷达卫星组成的环境减灾卫星星座。

On Sep.,6th 2008, China launched two optical satellites named H-1-A and HJ-1-B separately. A SAR small satellite will be launched in 2011. The final object is to realize the plan of a constellation consisting of **four optical satellites and four SAR satellites.**



National Dis

卫星参数-Satellite Parameters

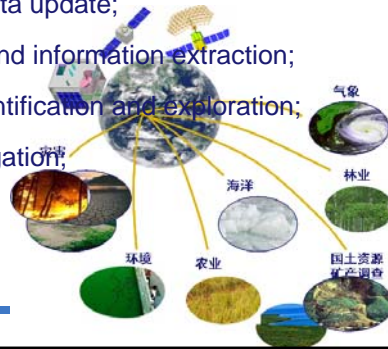
卫星 Satellite	载荷 Payload	空间分辨率 Spatial Resolution (m)	幅宽 Swath (km)	波段数 Band Number
HJ-1-A	CCD	30	700	4
	HSI	100	50	115
HJ-1-B	CCD	30	700	4
	IRS	B1、 B2、 B3 : 150 B4: 300	720	4
HJ-1-C	SAR	SCAN mode : 15~25 Strip mode :4~6	95~105 35~40	S-band

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应用领域—Application Fields

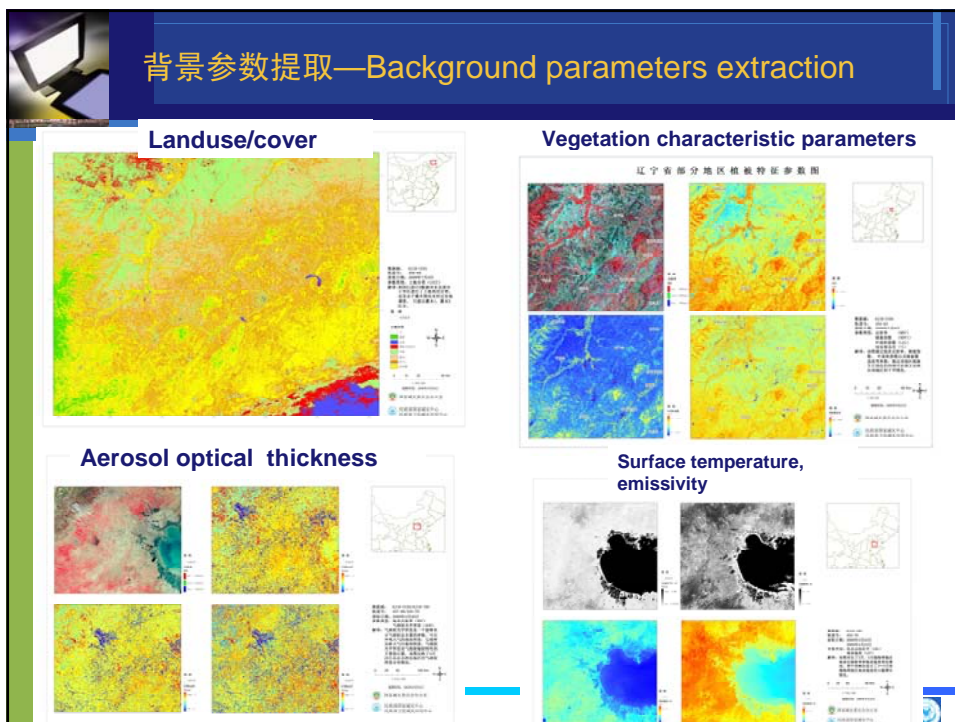
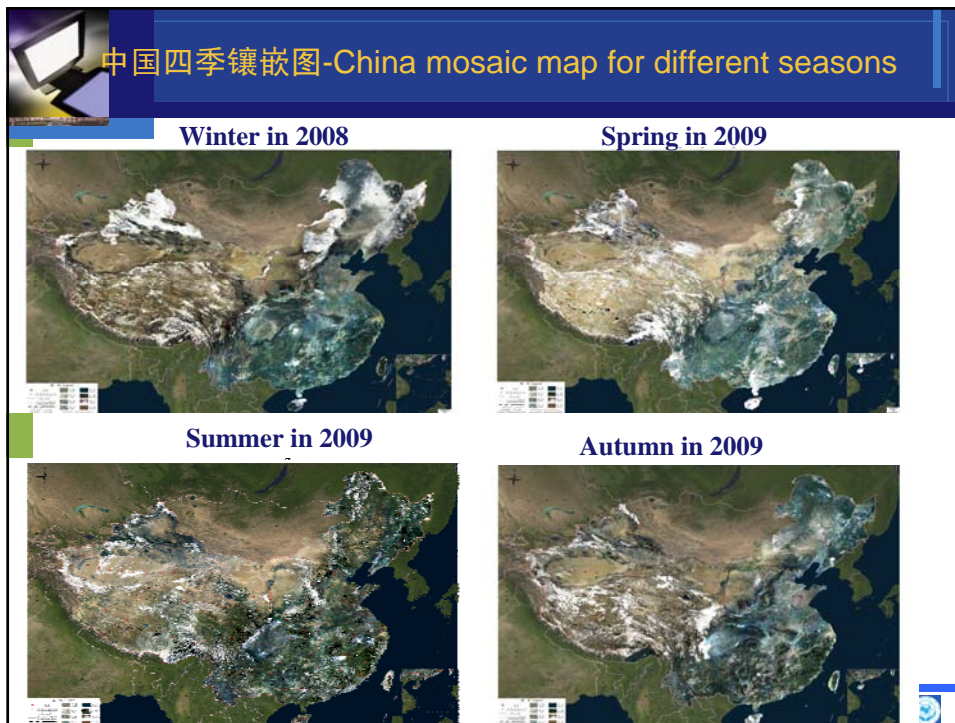
- ◆ 灾害监测与风险评估 Natural and technical disasters monitoring and risk assessment;
- ◆ 灾害综合评估 Disaster damage assessment;
- ◆ 环境监测 Environment monitoring;
- ◆ 土地利用数据更新 Land cover/use data update;
- ◆ 灾害背景信息提取 Disaster background information extraction;
- ◆ 矿物识别与矿产资源勘探 Mineral identification and exploration;
- ◆ 国土资源调查 Land resources investigation;
- ◆ 其他领域 Other fields.

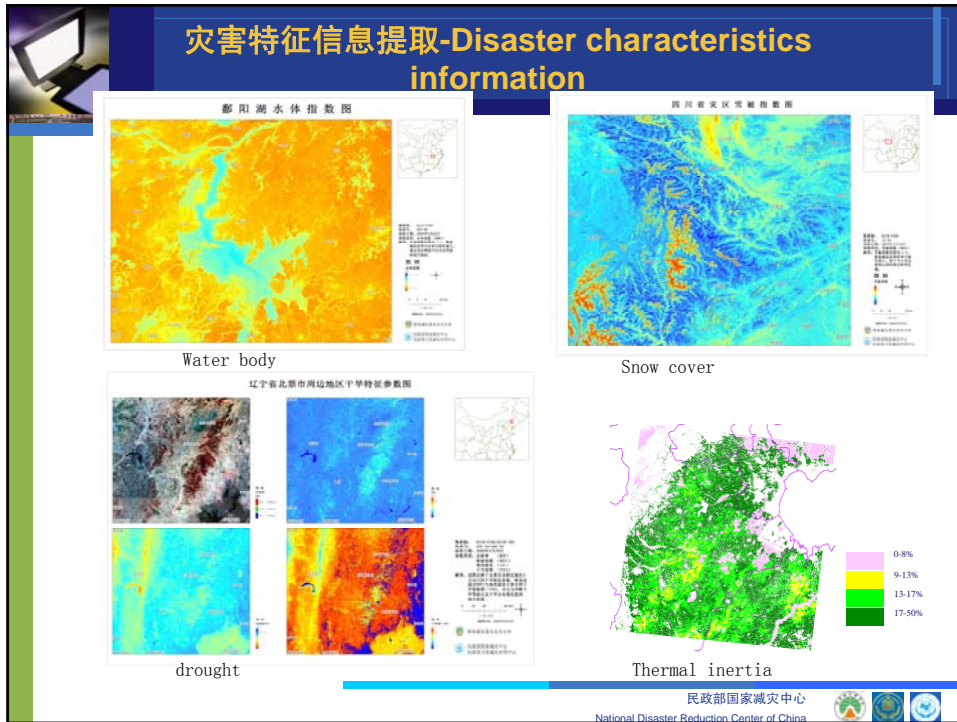


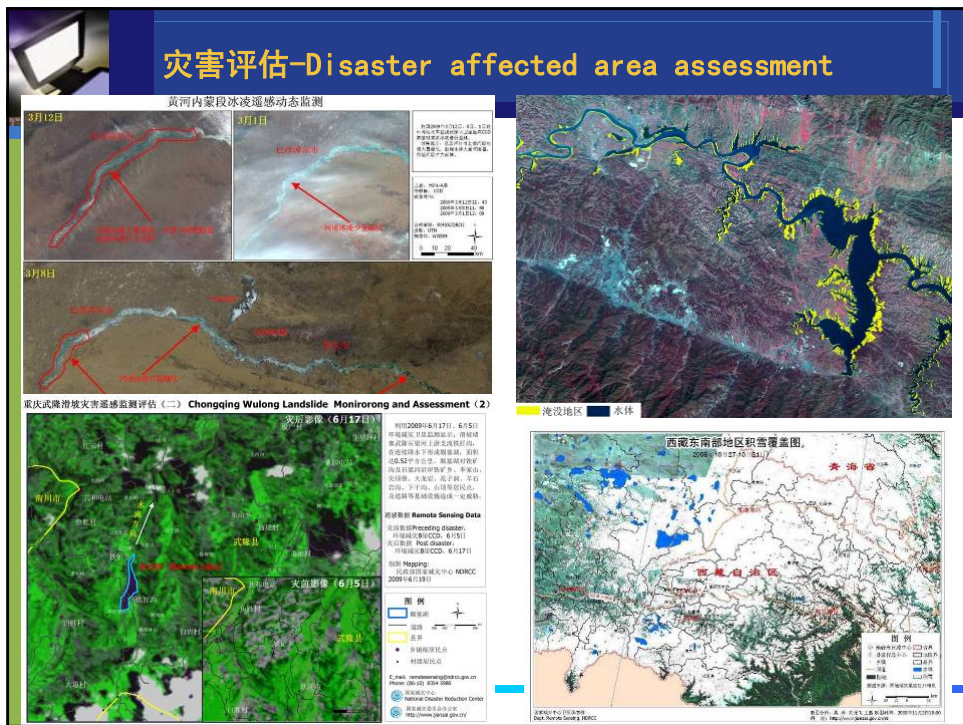
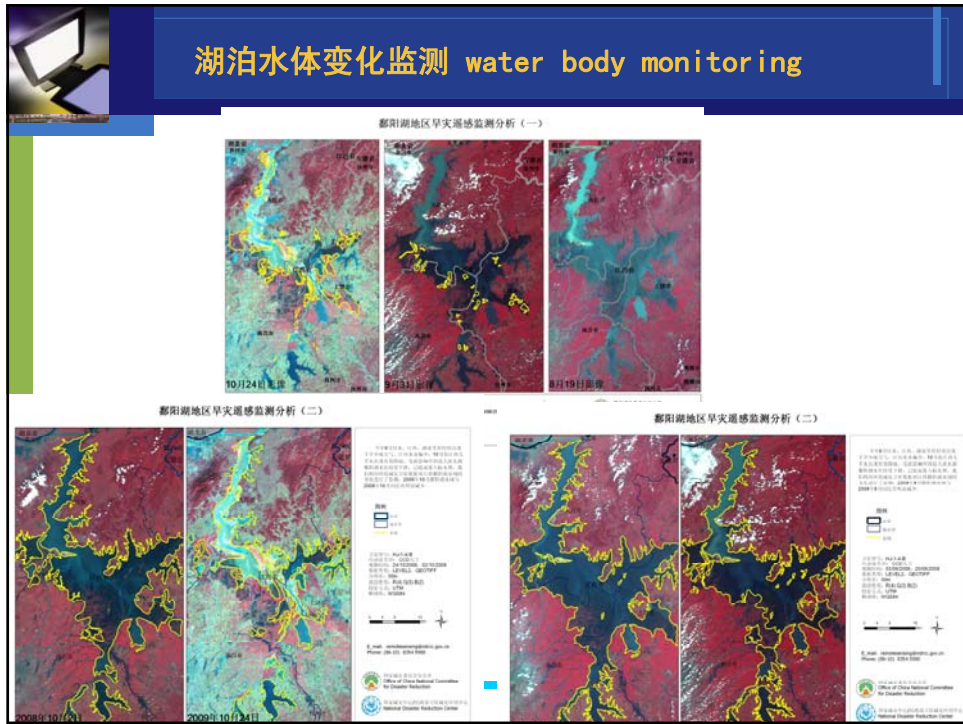
卫星运行管理 Operation Management

- ◆ 国家减灾中心负责减灾小卫星星座运行管理工作。目前，卫星运行指标正常、运行状态良好，共计成像3000多轨，成像时间累计400多小时。
- ◆ NDRCC is in charge of the operation management of the HJ satellites. Till now, the two satellites operation indicators is normal and the satellite is in good condition. There are totally more than 3,000 orbit of images has been acquired and the tasking time of the two satellites is more than 400 hours.

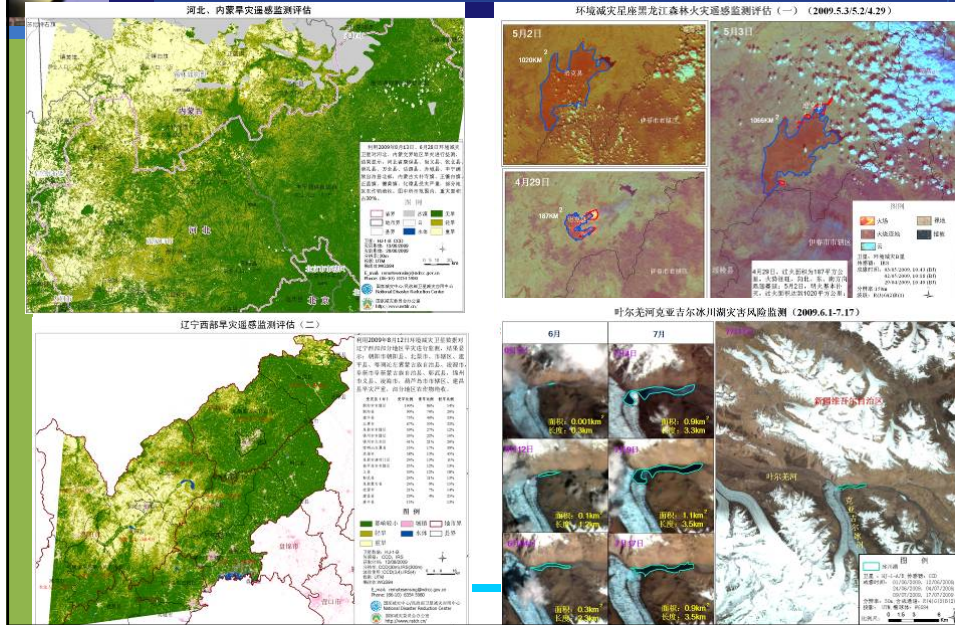






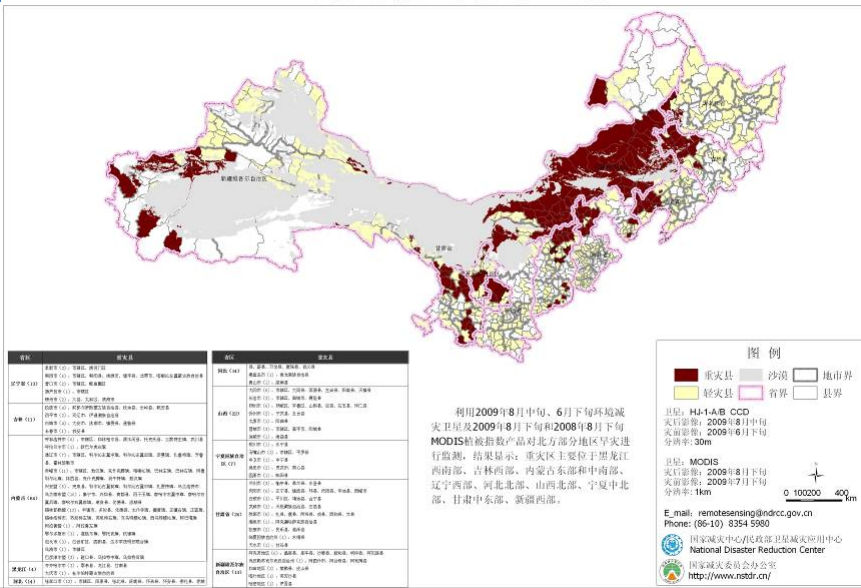


灾害动态监测图-Disaster dynamic monitoring



灾害综合评估-Comprehensive assessment

我国北方部分地区旱灾遥感监测评估





三、国际合作与交流 International cooperation and communication



国际机制——International initiatives

2007年5月中国加入空间与重大灾害国际宪章，国家减灾中心承担授权用户和项目经理职责。China joined the "International Charter Space and major disasters" in May,2007. NDRCC is act as the AU and PM of the mechanism.

2007年4月，中国民政部与联合国国际减灾战略联合成立国际减轻旱灾风险中心。"International Drought Risk Reduction Center" was established in April 2007, which was co-organized by MoCA of China and UNISDR.

积极筹备成立UN-SPIDER北京办公室。Prepared United Nations Space-based Platform for Disaster Management and Emergency Response (UN-SPIDER) Beijing Office.

1.1 制定国家减灾规划	制定国家减灾规划，明确减灾目标和任务，指导各级减灾工作。
1.2 开展减灾宣传教育	开展减灾宣传教育，提高公众减灾意识和自救互救能力。
1.3 开展减灾科学研究	开展减灾科学研究，提高减灾科技水平。
1.4 开展减灾国际合作	开展减灾国际合作，分享减灾经验和成果。
1.5 开展减灾能力建设	开展减灾能力建设，提高减灾队伍素质。
2.1 建立减灾信息平台	建立减灾信息平台，实现减灾信息资源共享。
2.2 开展减灾风险评估	开展减灾风险评估，提高减灾决策科学性。
2.3 开展减灾应急演练	开展减灾应急演练，提高减灾应急响应能力。
2.4 开展减灾国际合作	开展减灾国际合作，分享减灾经验和成果。
2.5 开展减灾能力建设	开展减灾能力建设，提高减灾队伍素质。
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3.4 开展减灾能力建设	开展减灾能力建设，提高减灾队伍素质。
3.5 开展减灾国际合作	开展减灾国际合作，分享减灾经验和成果。
3.6 开展减灾能力建设	开展减灾能力建设，提高减灾队伍素质。

2007-2009年平台项目工作总计划 (2007) 附件 4-1

国际服务-澳大利亚火灾 International Service-Fires Assessment in Australia



2009年2月上旬-3月中旬，减灾中心利用环境减灾卫星向澳大利亚维多利亚州森林火灾提供了1个多月的数据与产品服务。澳大利亚对我方提供的服务给予了高度评价和赞赏。

From Feb. 9 to the mid of March in 2009, NDRCC provided more than 100 scenes of HJ satellite images and 24 products to Australia government to support their emergency relief. Australia government gave great appreciation for the support effect.

Fires Assessment in Southeast Australia Using HJ-1 Satellite Data(Feb. 16/23)



The fire spot at A district was spreading to the southeast area. The B district will have many fire spots. The C district was spreading to the northwest.

Legend

- Fire Spot
- Base Area
- Base Area
- Fire Spot
- Base Area
- Fire Spot

Dear Mr. [Name],

On behalf of the National Disaster Reduction Center of China (NDRCC), I am writing to you in thank you, and through you, to thank other Chinese agencies and the Chinese government for your valuable support for the emergency relief of the fire in Victoria, Australia, by providing HJ-1 satellite images and other data to support the relief work.

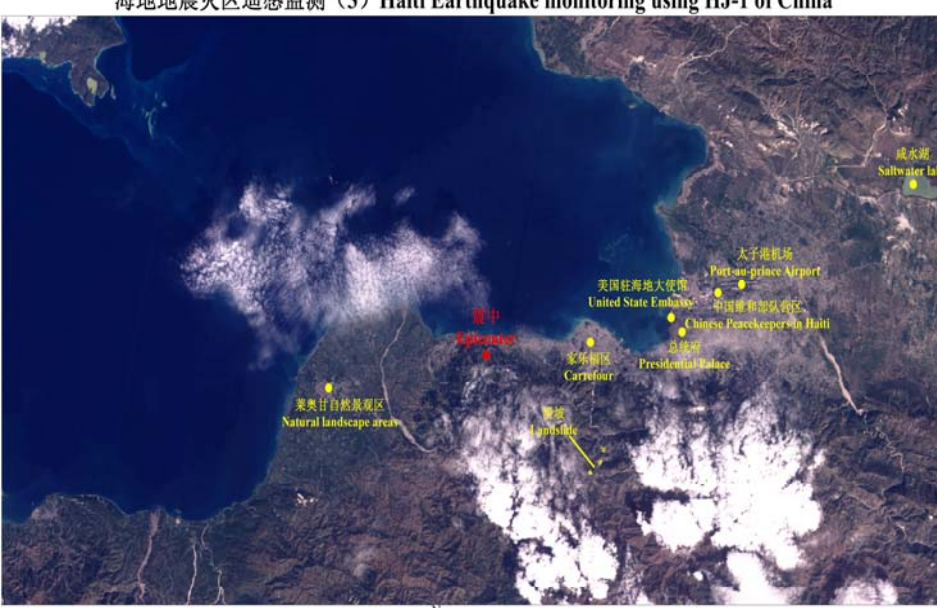
As you know, the National Disaster Reduction Center of China (NDRCC) is a national government agency of the People's Republic of China. The NDRCC has been established since 1982 and has been working in the field of disaster reduction and emergency relief for many years. We have been providing satellite images and other data to support the relief work of many countries and regions.

We are glad to hear that the HJ-1 satellite images and other data have been helpful for your relief work. We will continue to provide support for your relief work in the future.

Yours sincerely,
[Name]
National Disaster Reduction Center of China

减灾中心
National Disaster Reduction Center of China

海地地震灾区遥感监测 (3) Haiti Earthquake monitoring using HJ-1 of China



卫星型号 (Satellite): HJ-1B
获取时间 (Data Acquired): 14/01/2010
投影 (Projection): UTM

传感器类型 (Sensor): CCD
分辨率 (Spatial resolution): 30m
椭球体 (spheroid): WGS84

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Office of National Committee for Disaster Reduction
民政部国家减灾中心 / 民政部卫星减灾应用中心
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