Sharing Water: Environmental Flows as a Tool for Negotiation

Ms. Kate Lazarus
IUCN-The World Conservation Union

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The World Conservation Union

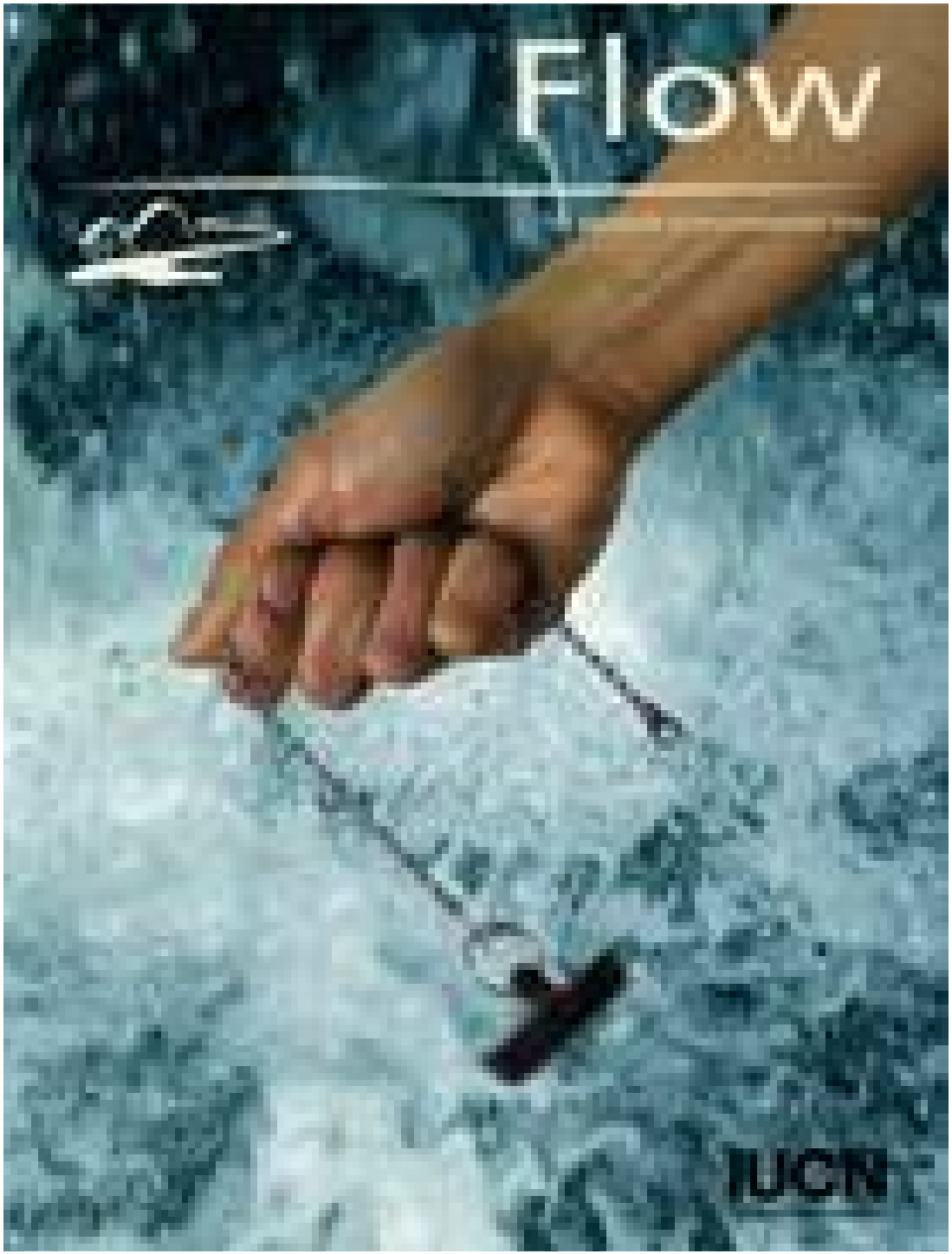
IUCN is a Union
State & non-State actors
>50 years old

Members
~140 countries
82 States
>100 government agencies
> 800-plus NGOs

Secretariat
~1000 staff

Commissions
>10,000 people,180 countries, volunteers

Commission on Environmental, Economic and Social Policy


Flow
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What is IUCN doing?

Engaging mixed teams of State & non-State actors to translate FLOW into Burmese, Thai, Khmer, Chinese, Vietnamese, and Lao

This is about process and product

Environmental Flows

- Not just Natural Flows
- Not just Minimum Flows
- Not just Average Flows

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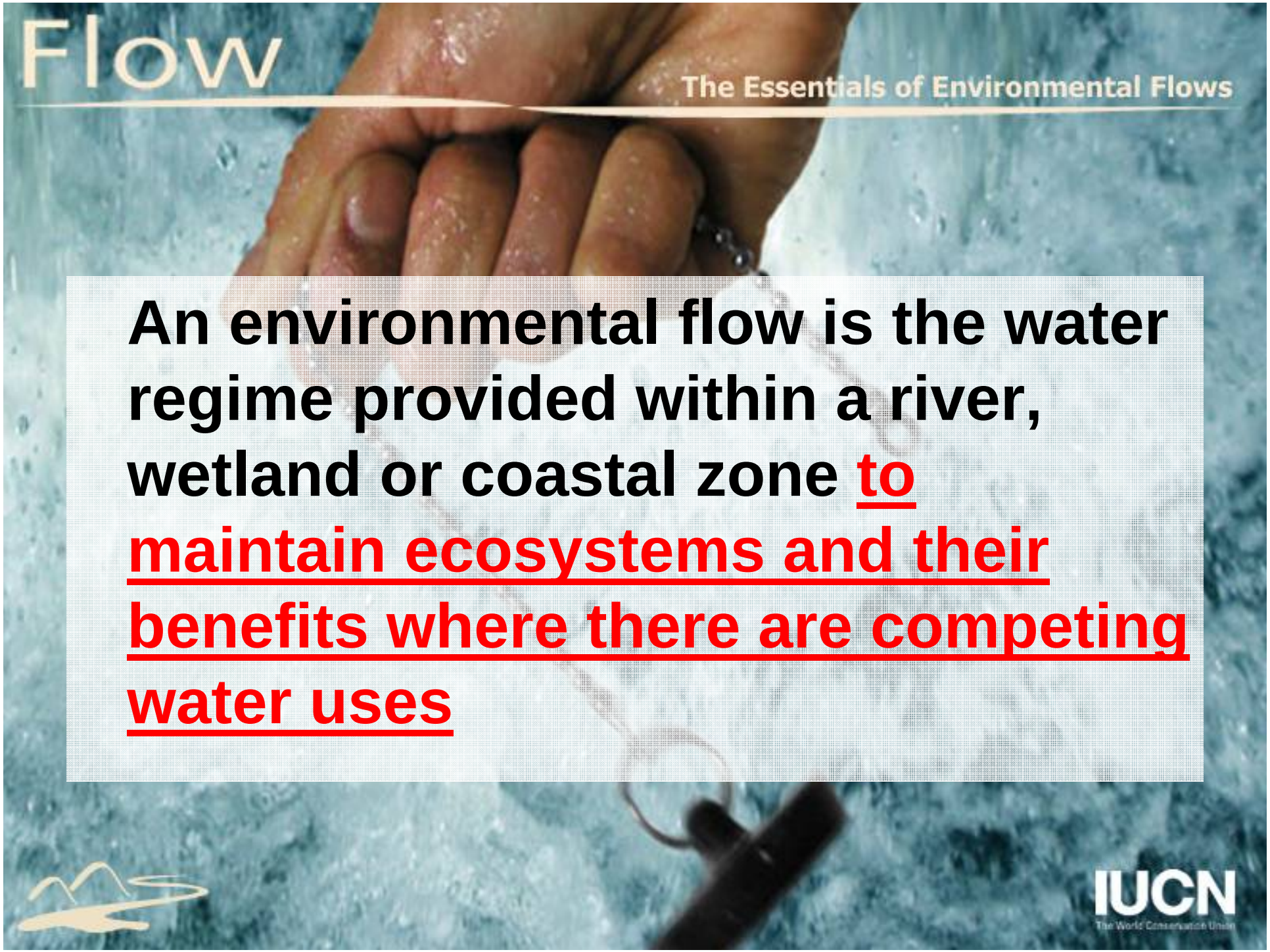
USE WISELY


Flow
The Essentials of Environmental Flows
An environmental flow is the water regime provided within a river, wetland or coastal zone to maintain ecosystems and their benefits where there are competing water uses
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The Reality

"HEALTHY WORKING RIVERS"

The stated goal for environmental flows for the River Murray in Australia is "a healthy, working river – one that assures us of continued prosperity, clean water and a flourishing environment". The term 'working' has been used to recognise the fact that the River will not be restored to its pre-European settlement, pre-regulation, pristine condition. For more information, visit 'The Living Murray', Murray-Darling Basin Ministerial Council, July 2002, at www.mdbc.gov.au/natural-resources/e-flows/thelivingmurray.html.

Putting E-Flows into practice is NOT easy.

- It requires an integration of a range of disciplines -- both scientific and socio-economic -- including engineering, law, ecology, economy, hydrology, political science and communication are required.
- It also requires learning and negotiations between stakeholders to bridge the different interests that compete for the use of water.
- The Multi-Stakeholder Platform (MSP) is one way to provide space for learning and new insights for negotiations.

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MSP deliberation informed by research & advocacy

MSP essential for 'flow regime' negotiations

Multi-Stakeholder Platforms (MSPs) or Dialogues

- actors with either a right, risk or general interest (stakeholders) are identified
- usually through representatives, invited & assisted to interact in a deliberative forum
- aiming for all participants to learn, & understand alternative perspectives
- *possibly* negotiate workable strategies & agreements

Desirable context

- ✓ Well-intentioned
- ✓ Clear purpose & scope
- ✓ Sufficient political support
- ✓ Sufficient time
- ✓ Sufficient resources
- ✓ Appropriate levels & scales

Desirable process

- ✓ Inclusive
- ✓ Facilitated
- ✓ Ethical
- ✓ Both visionary & focused
- ✓ Holistic
- ✓ Informed
- ✓ Deliberative
- ✓ Communicative

Desirable outcomes

- ✓ Options assessed
- ✓ Rights & risks established
- ✓ More understanding
- ✓ Workable agreements
- ✓ Discursive legitimacy
- ✓ Constructive influence

?

To what extent can a hydrological regime be altered from natural condition for purposes of water resource development & management, while still maintaining an accepted level of ecosystem condition

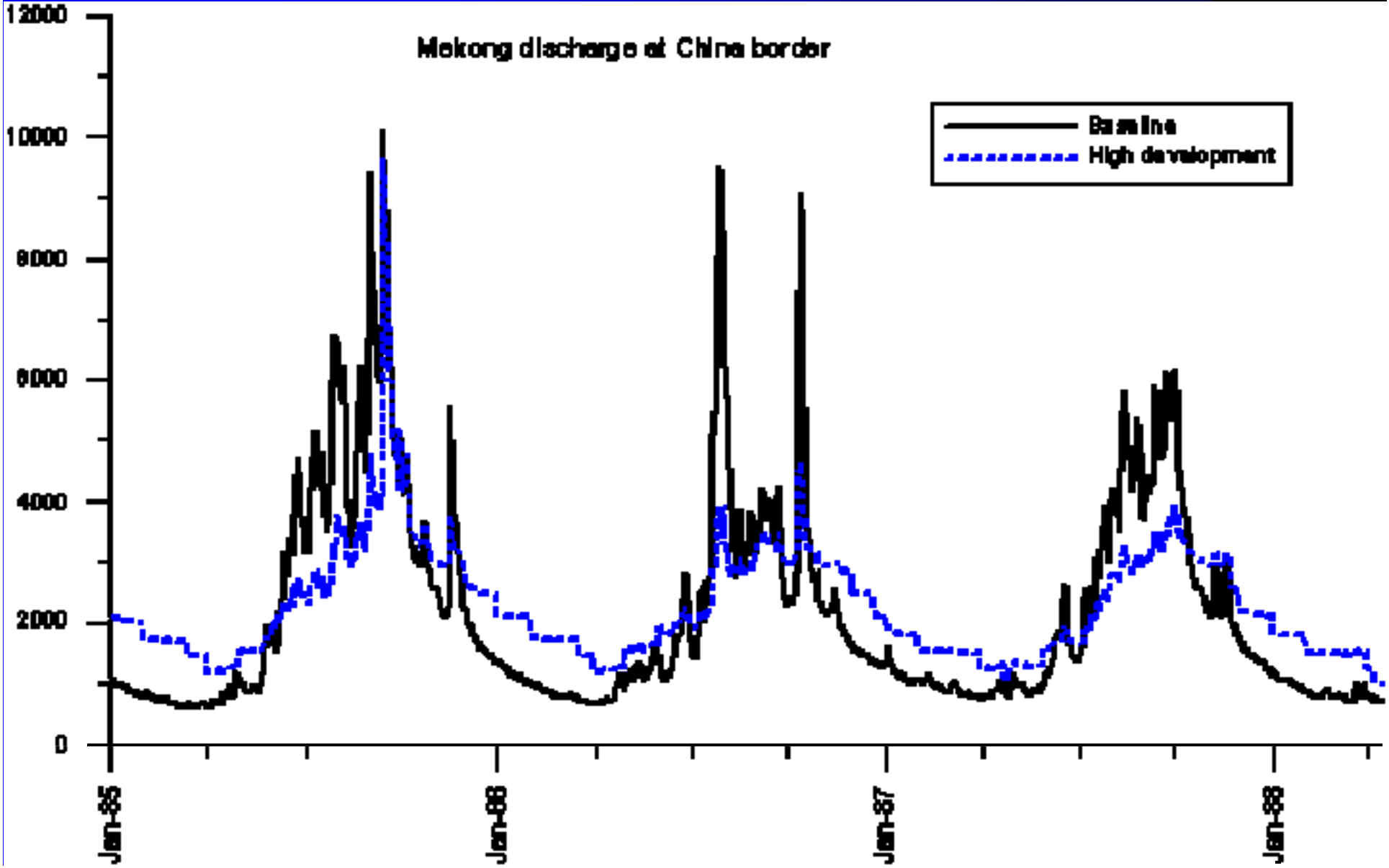
FLOW

key driver of ecosystem

Requires knowledge of:

- Flow-related conditions governing ecosystem character - supporting biota & local people
- Potential impacts of altered flow patterns on ecosystem & livelihoods

MANWAN DAM, YUNNAN PROVINCE, CHINA


Mekong discharge at China border
Baseline
High development
12000
10000
8000
6000
4000
2000
0
Jan-85
Jan-86
Jan-87
Jan-88

What assumptions can be made from the hydrograph just shown? Are they valid?

Impacts of changing time & extent of floods on Cambodia's Tonle Sap?

Impacts of higher dry season flows?

Impact of changed flows on people?

Etc……

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Mekong Wetlands Biodiversity – Use Wisely

New thinking is needed to manage water resources sustainably and equitably – within the broad framework of IWRM

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Many methods ...

No single best method, approach or framework to determine an environmental flow

For most of the world's river systems, no specific ecological objectives have been set

More and more methods now take a holistic approach

Eg.

Downstream Response to Imposed Flow Transformation (DRIFT) framework

>200 methodologies

These are being tested in…….

Vietnam – Huong River Basin

Thailand – Songkhram River Basin ?

Mekong River mainstream - IBFM

As well as in

China (Yellow River), India, Senegal, South Africa, Australia

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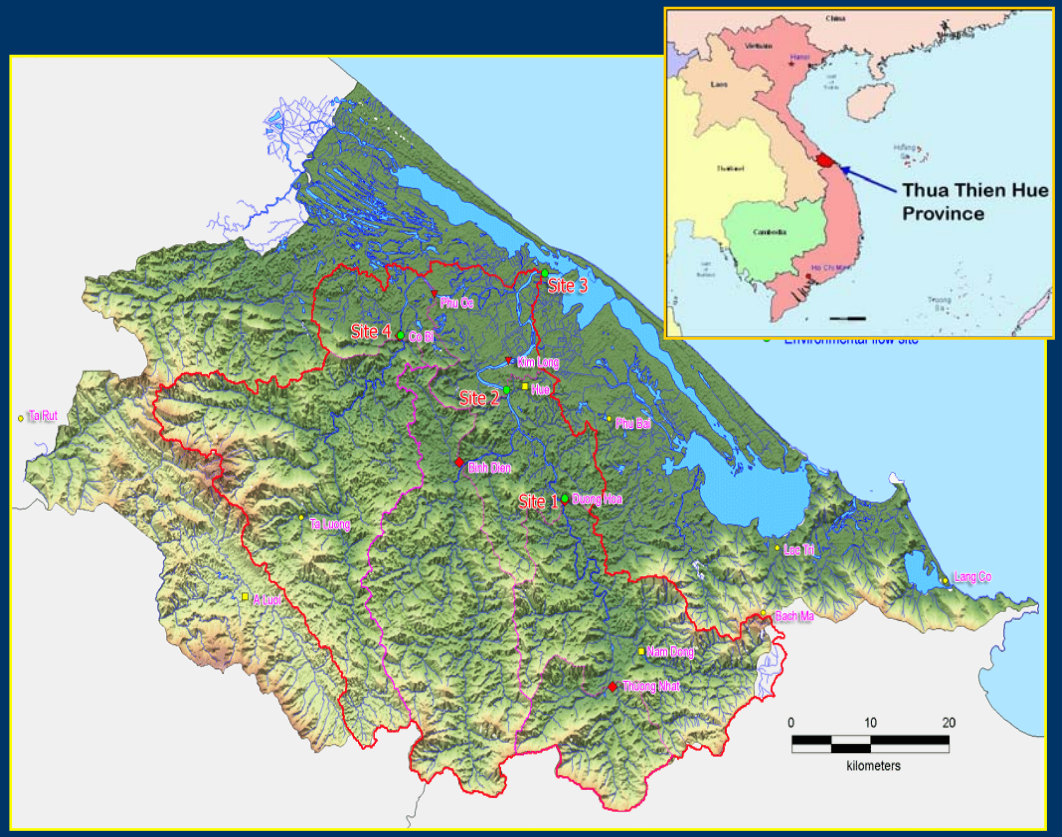
Mekong Wetlands Biodiversity – Use Wisely

Viet Nam's Huong River Basin

2/3 of pop of Hue Province live within Huong River Basin

Flooding in rainy season & saltwater intrusion in dry season major concerns



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Mekong Wetlands Biodiversity — Use Wisely

Searching for Solutions:

2003-2004 EFA project carried out by Huong River Projects Management Board, IWMI, IUCN within the framework of an IWRM strategy for the province

The E-Flow initiative was the first of its kind in Viet Nam

Local water managers and users were assisted to understand the principles and practices of E-flows, to institutionalise EFAs as a normal part of IWRM, and to build local capacity of partners to undertake such work & factor it into water resources decision-making.

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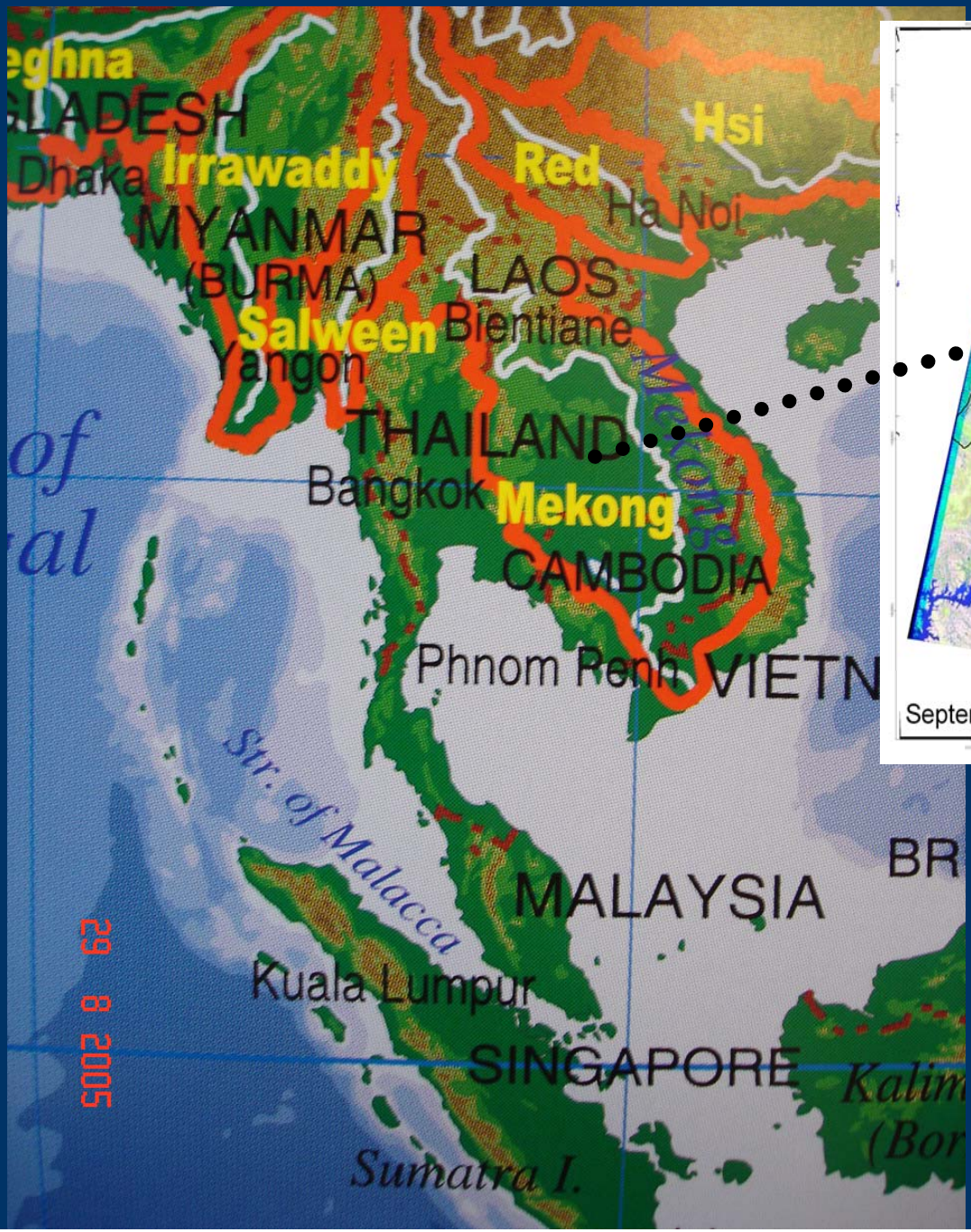
Outcomes of the Rapid EFA workshop

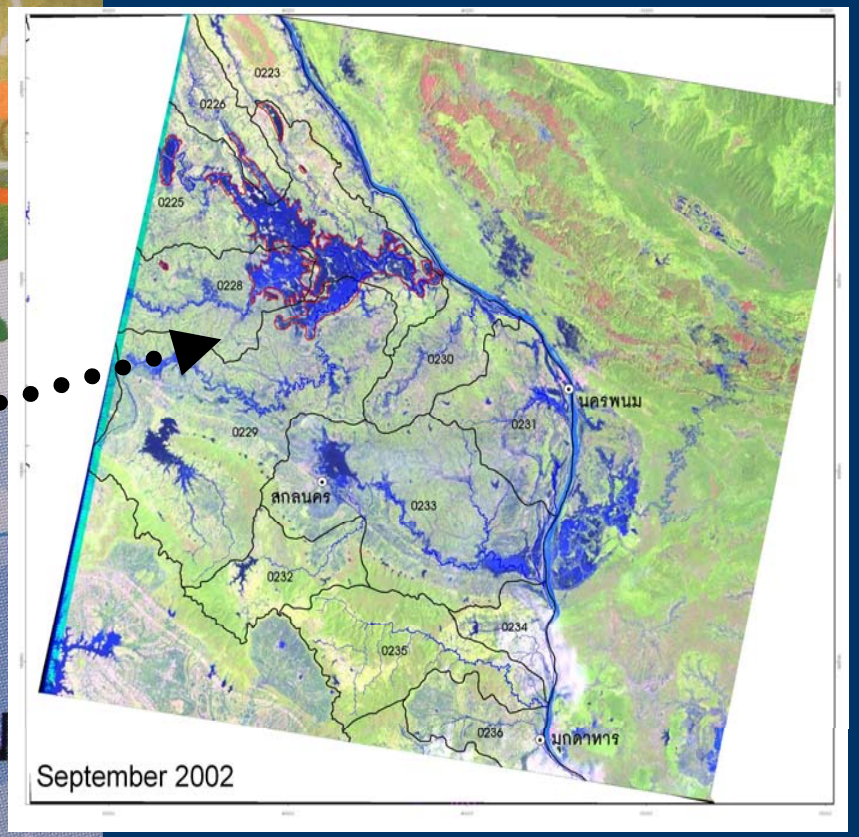
Incorporated ecological assessments of hydrological scenarios

Identified and distinguished between different key elements of the flow regime

Alternative hydrological regime scenario was estimated based on understanding of the predicted impact of dam development projects on the flow regime

Development of indicators to indicate impact of changing flow conditions on the riverine ecosystem & local population that relies on the river system.

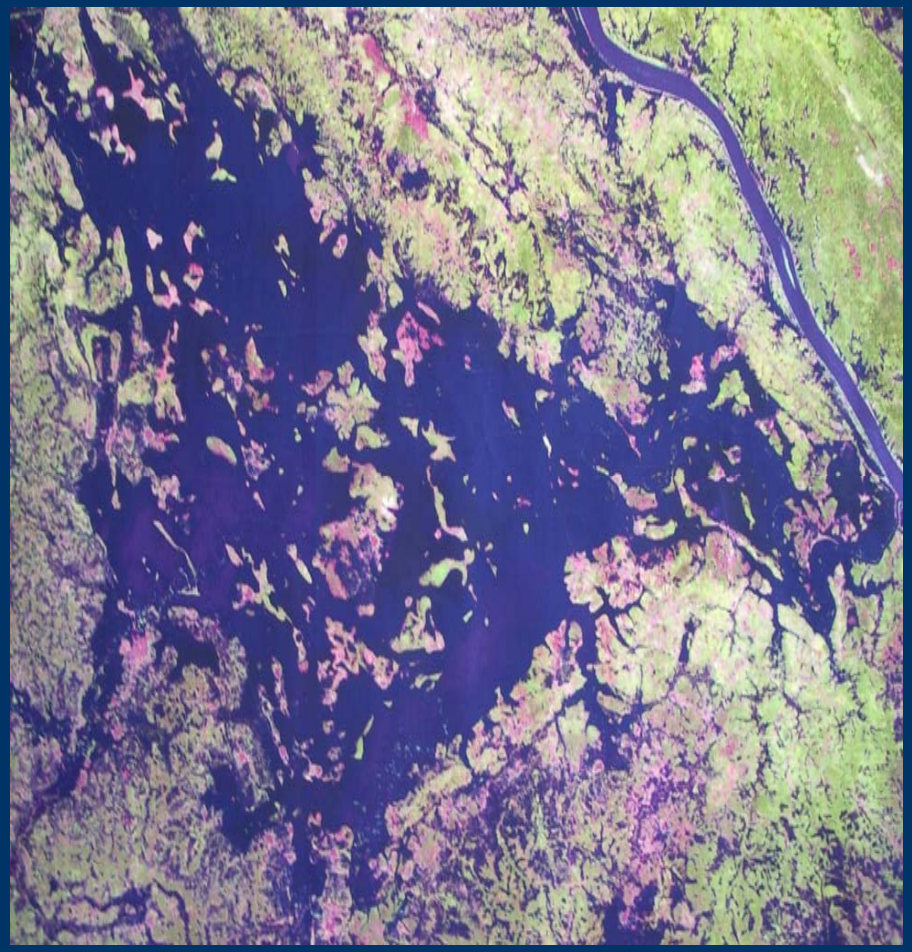




Lower Songkhram River Basin

Lower Songkhram River Basin

Wet Season



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Ecosystem of the Lower Songkhram River Basin

Dry Season

Wet Season

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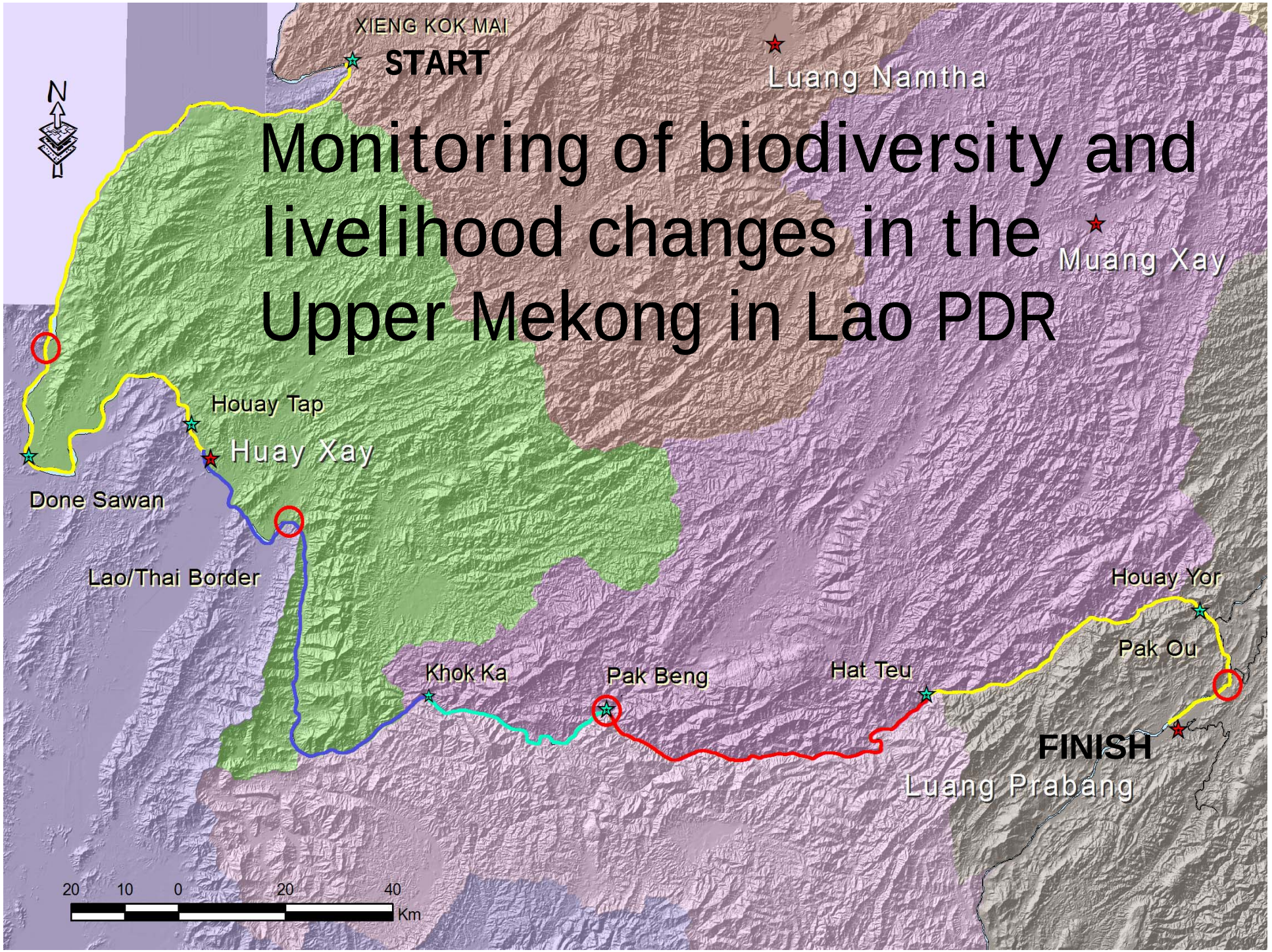
Natural Flows vs. Economic Development?

Income generation

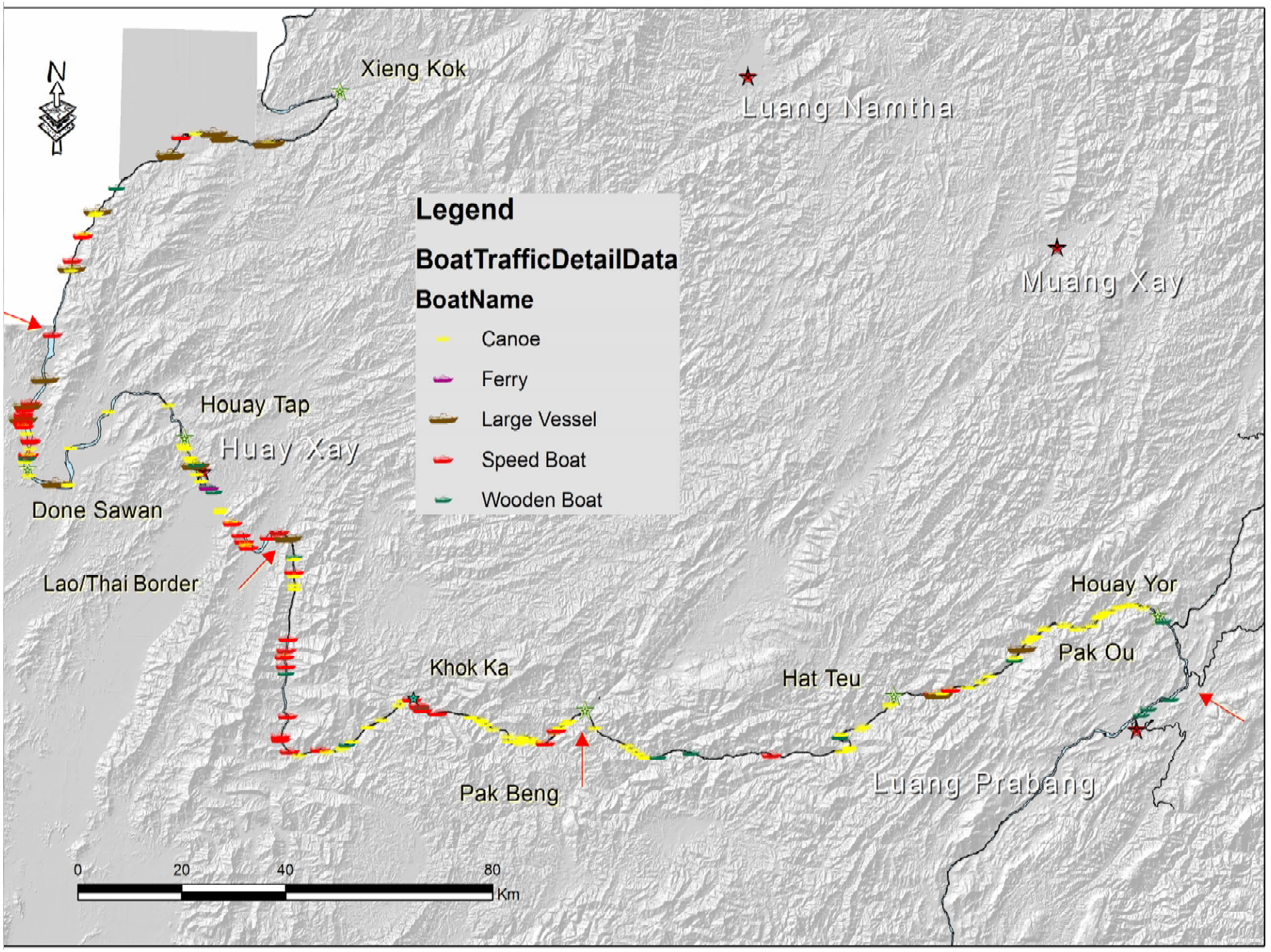
Irrigated Agriculture

Livelihoods


XIENG KOK MAI
START
Luang Namtha
Monitoring of biodiversity and livelihood changes in the Upper Mekong in Lao PDR
Muang Xay
Houay Tap
Huay Xay
Done Sawan
Lao/Thai Border
Houay Yor
Pak Ou
Khok Ka
Pak Beng
Hat Teu
FINISH
Luang Prabang
N
20 10 0 20 40
Km

Purpose

- Develop further understanding of riverine ecosystems, habitats, species, and the communities that depend on resources for their livelihoods
- Identify site specific areas for detailed information gathering, particularly on livelihoods development
- Establish baseline information of ecosystems & livelihoods
- Build capacity for environmental and social survey methodologies in Lao PDR
- Develop a plan for long-term monitoring of biodiversity and livelihood changes


N
Xieng Kok
Luang Namtha
Muang Xay
Legend
BoatTrafficDetailData
BoatName
Canoe
Ferry
Large Vessel
Speed Boat
Wooden Boat
Houay Tap
Huay Xay
Done Sawan
Lao/Thai Border
Houay Yor
Pak Ou
Khok Ka
Hat Teu
Pak Beng
Luang Prabang
0
20
40
80
Km


NO
WATER
NO
FUTURE
Fish
needs
water
HANDS
OFF
OUR
WATER


ประชุมเพื่อพิจารณาร่างแผนปฏิบัติการประจำปี ๒๕๔๘-๒๕๔๙
รงการอนุรักษ์และใช้ประโยชน์ความหลากหลายทางชีวภาพอย่างยั่งยืน
ในพื้นที่ชุ่มลุ่มน้ำโขง พื้นที่สาธิตลุ่มน้ำสงคราม
วันที่ ๒๑ ส ๒๕๔๘

BEIJING, CHINA: UN SYMPOSIUM ON HYDROPOWER & SUSTAINABLE DEVELOPMENT, OCTOBER 2004


เครือข่ายองค์กรชุมชนวิถีไทบ้านลุ่มน้ำสงคราม
สหภาพสากลว่าด้วยการอนุรักษ์(IUCN)

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