Guidance for Developing National Clearing-House Mechanisms

Olivier de Munck
Programme Officer, CHM, CBD Secretariat
## Roadmap for establishing and strengthening national CHMs

<table>
<thead>
<tr>
<th>Level</th>
<th>Situation</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>No CHM NFP</td>
<td>Convince Party to nominate CHM NFP</td>
</tr>
<tr>
<td>1</td>
<td>CHM NFP not equipped</td>
<td>Find solutions to provide basic infrastructure &amp; communication facilities</td>
</tr>
<tr>
<td>2</td>
<td>No national CHM website</td>
<td>Get tools &amp; support to establish web presence</td>
</tr>
<tr>
<td>3</td>
<td>National CHM web presence</td>
<td>Enhance web content</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Improve user experience</td>
</tr>
<tr>
<td>4</td>
<td>Good national CHM website</td>
<td>Expand information services</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Establish interoperability mechanisms</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Support other national CHMs</td>
</tr>
</tbody>
</table>

### Adapt guidance to national situation

- No one-size-fit-all solution
- Various needs → Various approaches and responses
Convince Party to nominate CHM NFP

- **Explain the important role of the CHM**
  - Support to the NBSAP process
  - Portal for national knowledge on biodiversity
  - Useful as national dissemination tool
  - Public education & awareness
  - Can increase international visibility
  - Country image, promotion of eco-tourism, ...
  - Should facilitate scientific & technical cooperation

- **Identify the right person or partner institution**
  - Survey of national biodiversity actors (scientific institution, museum, university, ...)
  - There may be a strong sustainable existing institution interested in carrying out the role of CHM NFP
    - Win-Win situation
  - Role of CHM NFP is very different from CBD NFP
## Level 0 – CBD NFP vs. CHM NFP

<table>
<thead>
<tr>
<th>CBD NFP</th>
<th>CHM NFP</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Political Role</td>
<td>• Technical Role</td>
</tr>
<tr>
<td>• Government representative</td>
<td>• Project Manager</td>
</tr>
<tr>
<td>• Diplomat skills</td>
<td>• Entrepreneur skills</td>
</tr>
<tr>
<td>• Decision-making process</td>
<td>• Implementation process</td>
</tr>
<tr>
<td>- Negotiation</td>
<td>- Scientific &amp; tech. cooperation</td>
</tr>
<tr>
<td>- National Policy</td>
<td>- Information Management</td>
</tr>
<tr>
<td>- National Planning</td>
<td>(gathering, disseminating)</td>
</tr>
<tr>
<td></td>
<td>- Webmaster</td>
</tr>
</tbody>
</table>

• Both roles are important & time-consuming
  → Adequate capacity to be effective

• Importance of collaboration between CBD & CHM NFPs
  → CHM NFP should serve the CBD NFP
Level 0 – Planning the new CHM

- Promote and plan the CHM at national level
  - Convince national decision-makers that CHM is useful
  - Integrate the CHM in the NBSAP
  - Identify & mobilize resources (National, GEF/NBSAP, other)
  - Prepare a plan with sustainability in mind
  - Establish inter-institutional coordination mechanism
  - Identify and capture national information & knowledge

- Involve stakeholders and users
  - Involve representatives of your target audience when planning, testing and collecting feedback
  - Joint ongoing process to improve effectiveness
Level 0 – Planning the new CHM

Prepare a "business plan" for the New CHM

- Institutional arrangements
  - Responsibilities & Terms of references
  - Partnership arrangements

- Resources allocation
  - Human resources
    - Technical: graphic design, programming, webmaster
    - Content: management, update, validation
  - Website hosting options
  - Web content production & management

- Activities
  - Building national contact network
  - Learn about NBSAP priorities, targets & implementation
  - Information gathering & disseminating
  - Information architecture & web content preparation
  - Outreach & awareness activities
Level 1 – CHM NFP Not Equipped

Provide basic infrastructure & communication facilities

- **Party's responsibility**
  - CHM NFP should be operational
  - Donors insist on sustainability

- **Prepare realistic project proposal**
  - First assess sustainability potential
  - Provide a detailed description/justification of needs
  - Project funding is temporary

- **Identify sustained resources**
  - At least small budget to maintain operations
  - Resources may be allocated if effectiveness is proven
Level 2 – No National CHM Website

Establish web presence

- Several options to establish web presence
  - New or existing website
  - Hosted in-house or externally
  - Select a content management system (CMS)

- Important decision
  - Based on available resources and expertise
  - Each option has advantages and drawbacks
  - Big impact on maintenance
  - Political aspect
  - Choose the safest and easiest approach
  - Don't undertake a big project without adequate resources
Options to establish web presence

- **Hosting a website**
  - Requires a solid infrastructure:
    - Web server + Firewall + High speed Internet + Support 24/7
  - Don't do it unless you have a special team

- **Obtaining space on existing website**
  - Agreement with a strong supporting partner
  - Many African Countries have their website hosted in Belgium

- **Using a web hosting service**
  - Many options
  - Price depending on usage
Use a Content Management System (CMS)

- **Highly recommended**
  - Avoid reinventing the wheel
  - Many features, including multi-lingual capabilities
  - Easier maintenance
  - Adherence to modern web standards (XHTML, CSS)
  - Extensible

- **Selecting a CMS**
  - Several good open-source CMS
    - WordPress, Drupal, Joomla, Typo3
  - European Portal Toolkit (PTK)
    - Customized open-source built for CHM
  - Commercial CMS or custom solution
    - Depends on existing situation
Level 2 – No National CHM Website

CMS-based website infrastructure

National CHM Website
Menu, Content & online services

Core ICT Infrastructure (web & database servers)

Content Management System (CMS)

Public space

Protected space

Navigation
Search
Update
Collaboration
Level 3 – National CHM Web Presence

Join the CHM Network

- Notification 2008-066
  

- Show CHM Logo

- Common domain **chm-cbd.net**
  - National URL can be maintained
  - To strengthen CHM networking
  - Each country/partner is encouraged to join **cc.chm-cbd.net** (where cc is the country code)

- How to join the domain
  1. Configure the web server to accept the URL
  2. Give URL & IP address to Secretariat
  3. The Secretariat will activate the URL in their Domain Name System (DNS)
Level 3 – National CHM Web Presence

Enhance web content

• **Information Architecture:**
  Structure of web navigation (menus, header, footer, search) to provide access to various website sections

• **User Experience:**
  Web content must be attractive, easy to find, up-to-date and relevant

• **Usability Testing:**
  Prepare test scenarios and involve users in testing the website

• **Requires a permanent effort**
Level 3 – National CHM Web Presence

Enhance web content

- **Reasons of no-use**
  - Nobody knows that it exists → audiences
  - It is not useful / no demand → strategic vision (marketing)
  - Product that does not sell because nobody needs it
  - Badly organized; too much information; not up-to-date
  - Technical issues, bugs

- **Solutions**
  - Target audiences → For whom? What for?
  - User monitoring → Feedback, Statistics, "User Testing"
  - User experience (UX) → "User-Centric" Design
  - Information architecture (IA) → Home page & Navigation

*Perfection is achieved not when there is nothing to add, but when there is nothing to remove*
Level 3 – Web Content

References

1. **Content strategy for the web** (2nd Ed.)
   - Kristina Halvorson & Melissa Rach
   - [http://www.contentstrategy.com](http://www.contentstrategy.com)

2. **The elements of user experience** (2nd Ed.)
   - Jesse James Garrett
   - [http://www.jjg.net/elements](http://www.jjg.net/elements)

3. **Don't make me think** (2nd Ed.)
   A common sense approach to web usability
   - Steve Krug
   - [http://www.sensible.com/dmmt.html](http://www.sensible.com/dmmt.html)

4. **Rocket surgery made easy**
   The DIY Guide to Finding and Fixing Usability Problems
   - Steve Krug
   - [http://www.sensible.com/rsme.html](http://www.sensible.com/rsme.html)
Role of a national CHM

1. **Entry point for country biodiversity**
   - Search result for "[Country] + Biodiversity"

2. **Organized menu of available information**
   - Biodiversity
   - NBSAP
   - Activities / Actors / Cooperation
   - References and services (per categories and/or audiences)
   - Interactive area (participation / contribution / collaboration)
   - About us

3. **Home page**
   - Should answer 2 questions:
     - **Where am I?** (in the Internet shopping mall)
     - **What can I do here?** (What can I buy?)
   - Promotion of what's recent or most important
Level 3 – National CHM Web Presence

Enhance web content to disseminate information

- Disseminate biodiversity-related information
  - Biodiversity in the country
  - NBSAPs & national reports
  - Other national biodiversity-related documents
  - Information by programme areas relevant to the country

- Support NBSAP implementation
  - National targets and indicators
  - Build an inventory of projects/initiatives
  - Links to expertise (experts, centres of excellence)
### Potential Menu for a National CHM Website

<table>
<thead>
<tr>
<th>Biodiversity [Country]</th>
<th>Strategy &amp; Implementation</th>
<th>References &amp; Services</th>
<th>Participate &amp; Contribute</th>
<th>About</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overview</td>
<td>NBSAP</td>
<td>For</td>
<td>Your actions</td>
<td>Us</td>
</tr>
<tr>
<td>- Introduction</td>
<td>- Vision</td>
<td>- Everyone</td>
<td>- Suggestions</td>
<td>- Who we are</td>
</tr>
<tr>
<td></td>
<td>- Priorities</td>
<td>- Educators</td>
<td>- Join us</td>
<td>- Our mission</td>
</tr>
<tr>
<td></td>
<td>- Targets</td>
<td>- Journalists</td>
<td>- Your opinion</td>
<td>CBD</td>
</tr>
<tr>
<td></td>
<td>- Indicators</td>
<td>- Government</td>
<td></td>
<td>- Strategic Plan</td>
</tr>
<tr>
<td>Ecosystems</td>
<td>Actions</td>
<td>- Scientists</td>
<td></td>
<td>- Aichi Targets</td>
</tr>
<tr>
<td>- ...</td>
<td>- Initiatives &amp; Projects</td>
<td></td>
<td></td>
<td>CHM</td>
</tr>
<tr>
<td></td>
<td>- Progress</td>
<td></td>
<td></td>
<td>- Information Exchange</td>
</tr>
<tr>
<td></td>
<td>- Reports</td>
<td></td>
<td></td>
<td>- Network</td>
</tr>
<tr>
<td>Species</td>
<td>Actors</td>
<td>About</td>
<td>For members</td>
<td></td>
</tr>
<tr>
<td>- ...</td>
<td>- Government</td>
<td>- Protected Areas</td>
<td>- Forum</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Others</td>
<td>- Species</td>
<td>- Share data</td>
<td></td>
</tr>
<tr>
<td>Threats</td>
<td>Cooperation</td>
<td>- Indicators data</td>
<td>- ...</td>
<td></td>
</tr>
<tr>
<td>- ...</td>
<td>- National &amp; Local</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Protected Areas</td>
<td>- Regional</td>
<td>References</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- ...</td>
<td>- International</td>
<td>- Events</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**For members**
- Forum
- Share data
- ...
Examples of national CHM

- **Canada**
  - [http://www.biodivcanada.ca](http://www.biodivcanada.ca)
  - Good federal structure

- **Europe - BISE**
  - [http://biodiversity.europa.eu](http://biodiversity.europa.eu)
  - Good information architecture

- **Switzerland**
  - [http://ch.chm-cbd.net](http://ch.chm-cbd.net)
  - Good repository

- **Colombia**
  - [http://www.humboldt.org.co/chmcolombia](http://www.humboldt.org.co/chmcolombia)
  - Used by expert community
Level 4 – Good National CHM Website

- **Expand information services**
  - Typical services
  - Specialized services contributing to the Strategic Plan

- **Establish information exchange mechanisms**
  - Interface specification
  - Interoperability

- **Support other national CHMs**
  - Advice and support
  - Cooperation
Level 4 – Information Services

Typical CHM information services

- Information search
- Databases (species, experts, calendars)
- Directories
- Videos
- Maps
- Forums
- Social networking
Specialized information services contributing to the Strategic Plan

<table>
<thead>
<tr>
<th></th>
<th>Aichi Strategic Goal</th>
<th>Information Services</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Underlying causes &amp; mainstreaming</td>
<td>Knowledge of biodiversity and of ecosystemic services</td>
</tr>
<tr>
<td>B</td>
<td>Reduce pressures</td>
<td>Information on invasive species, threatened species, vulnerable ecosystems</td>
</tr>
<tr>
<td>C</td>
<td>Safeguard biodiversity</td>
<td>Information on protected areas, ecosystems, species</td>
</tr>
<tr>
<td>D</td>
<td>Increase benefits</td>
<td>Information on sustainable use</td>
</tr>
<tr>
<td>E</td>
<td>Enhance implementation</td>
<td>NBSAP Indicators Cooperation Funding sources</td>
</tr>
</tbody>
</table>
Level 4 – Information Services

Specialized information services for planning and reporting

National Planning (NBSAP)
- National Strategy & Priorities
- Reporting Process
  - National Targets
  - National Indicators

National Reporting (NR)
- Implementation & Cooperation (Projects, Actors, Experts, ...)
- Collaboration & Networking Tools
- News, Facts & Figures
- Links in NR
- Online Reporting
- Case Studies
- Success Stories
- Lessons learned

National CHM
- CHM Vision & Strategy
- Online NBSAP
- Participative Planning

National Website - Information Exchange Platform
Level 4 – Information Services

- **CHM → Planning**
  - Raising public awareness on national challenges and priorities
  - Participative planning through stakeholder consultations to collect views, comments and suggestions
  - Dissemination of NBSAP to stakeholders and the public
  - Mobilization of support for participation and implementation
  - Getting feedback on existing NBSAP for review and further planning

- **CHM → Reporting**
  - Central collection of stakeholders' inputs for national reports
  - Provision of relevant sources of information/data for reporting
  - Online collaboration to collect comments/suggestions on draft report
  - Sharing case studies and success stories
  - Dissemination and promotion of national report
  - Providing up-to-date content for links in national reports
Establish exchange mechanisms with other networks

- Define information exchange interface
  - Basis for data exchange & aggregation
  - Important to define good formats and classifications
  - Agree on single update point

- Interoperability
  - Automated information exchange between computer systems
  - Various technologies based on standards (REST, RSS/Atom, Open Data Protocol, …)
  - Requires some IT expertise

- Examples
  - European Portal Toolkit (RSS/RDF News & Events)
  - InforMEA using Open Data Protocol [www.informea.org](http://www.informea.org)
  - GFIS RSS formats (News, Events, Publications) [www.gfis.net](http://www.gfis.net)
**Level 4 – Information Types**

<table>
<thead>
<tr>
<th>Core Types</th>
<th>Customized Types</th>
<th>Specific Types</th>
</tr>
</thead>
<tbody>
<tr>
<td>Meeting</td>
<td>Expert</td>
<td>Protected Areas</td>
</tr>
<tr>
<td>Decision</td>
<td>Case study</td>
<td>Invasive Alien Species</td>
</tr>
<tr>
<td>Side event</td>
<td>Best practice</td>
<td>EBSA map</td>
</tr>
<tr>
<td>NFP</td>
<td></td>
<td>ABS Certificate of Compliance</td>
</tr>
</tbody>
</table>
Level 4 – Information exchange mechanism

Interconnection & Interoperability

- Central CHM
- National CHM
- Database Records
- API

Roadmap
0 - No CHM NFP
1 - No Capacity
2 - No Website
3 - Web Presence
4 - Good Website
Final comments
Level 4 - Good National CHM Website

Encourage sharing of expertise to support other national CHMs

- But do not neglect your own National CHM
  - Make sure information is kept up-to-date
  - Ensure sustainability
  - Be ready to adapt to new situations

- Support other National CHM
  - in the same region / speaking the same language
  - Share expertise & data
  - Provide advice and technical support

- Facilitate Scientific & technical cooperation
  - Meet national actors and facilitate scientific and technical cooperation
  - Link to all cooperation agencies in the country (UN, EU, Bilateral Cooperation, NGOs, ...)
  - Promote transfer of technology
• General guidance (No one-size-fit-all)

• Importance of high-level commitment

• Often possible to do something even with limited support

• Do not hesitate to contact the CBD Secretariat

• Questions or comments

Thank you
Guidance for Developing National Clearing-House Mechanisms

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