

9th January 2007

Dear Mr. Prime Minister,

Recognising that the internet constitutes a powerful and democratic source of information and knowledge, the National Knowledge Commission (NKC) deliberated on ways to create a series of web portals. These web portals should become a decisive tool in the popular movements in support of the right to information, decentralisation, transparency, accountability and people's participation.

In order to increase openness and enhance accessibility the NKC recommends the creation of web portals to aggregate, organise and present relevant and useful content in local languages, in a highly uniform, customisable, user friendly and personalised way for several key areas related to basic human needs.

In this context the Commission recommends the following:

1. **Create national portals for basic needs:** National web-based portals should be set up on certain key sectors such as Water, Energy, Environment, Education, Food, Health, Agriculture, Employment, Citizen Rights etc. These would serve as a single point of access for consolidated information, applications and resources on the sector and will cater to a wide spectrum of users from citizens, entrepreneurs, small scale industries, students, professionals, researchers, local practitioners etc.
2. **Management and ownership by consortium:** While the government will be a key partner in the initial set up, the portals should be managed by a consortium with adequate representation from a wide range of stakeholders from the sector including NGOs, Research and Scientific Groups, Academic Institutions, Advocacy Groups, Government Agencies/ Departments, International Bodies, Other Funding Agencies, Private Sector, Technology Experts, Educators, eLearning experts, etc.
This will ensure that:
 - The portal remains a dynamic repository of information from multiple sources to aggregate content.
 - A collaborative model is adopted so that all stakeholders such as citizens, NGOs, businesses etc. participate in the creation, collaboration, sharing and discussions in a rich and meaningful way such that information cannot be monopolized by any one group.
 - The portal would have greater community ownership in order to ensure its success
 - Experiences, technology, processes etc. would be shared between various portals

3. **Establish procedures:** A set of procedures should be followed for setting up Portals:
 - Agreement on the subject area
 - Identification of champion/lead organization/s
 - Submission of proposal on architecture of the portal by the champion organization/s for consideration of the Commission
 - Identification of stakeholders and partners and setting up of framework for portal management.
 - Development of content
 - Launch of Portal
 - Development of rich, useful and relevant content

The cycle is expected to take between nine months to a year to complete, at the end of which a portal would be put in place which could then continuously be enhanced, populated and promoted.

3. **Provide access to government held data:** There are a host of issues related to data for a portal, such as sourcing, validation, quality and formats. The government is a major source of extensive data on various sectors. All government departments should easily make available data sets they have, in a digital format to the portal consortium. Data from different sectors needs to be analyzed holistically so that planning becomes more data-driven and reflects the ground situation. This means that data that is traditionally collected and managed separately, unrelated to each other, should now be seen together. There are no platforms or mechanisms currently in place to allow this to be done easily. Clear guidelines should be developed under which this data could be sourced in appropriate formats and regularly updated. The Right to Information may make this easier, but it continues to be a long drawn process. These procedures need to be streamlined and made simpler.
4. **Encourage collaborative funding:** The Portal effort can escalate quickly as the scale of content, partnerships and the scope is very large. The issue of funding for the effort includes big line items like technology development, map preparation, data gathering, developing applications, content creation, organizing and coordinating partnerships. Solutions need to be evolved depending on the sector in question. Several possibilities including public private partnerships and new business models should be explored. The government may also look at providing some public money for these efforts through grants.
5. **Reform mapping policy:** The advance in computer based Geographic Information Systems (GIS) has given mapping and use of maps a huge impetus in various fields. The ability to make sense of large amounts of interrelated data in spatial and attribute form has helped in visual decision making in various areas such as Agriculture, Transport, Disaster Management etc. An unambiguous mapping policy coupled with clear guidelines for use of spatial data are necessary

to share GIS data and thereby maximize the use of cutting edge technology and applications. Under the new mapping policy announced in May 2005, there is still some ambiguity about publishing of GIS maps on the internet by NGOs, Government and other development oriented agencies. Rich GIS based content in various sectors like Water, Health, Education etc can be delivered by various organizations and bodies in order to share information, foster an informed debate and allow for more effective planning. The mapping policy needs to allow for such access and provide clear guidelines.

6. **Enhance internet penetration and access:** At this stage, the use of Portals may be limited by the low internet penetration in the country, where less than 5% of population has access to internet. To address this challenge it is essential that the portal team should work proactively with NGO and Government networks, use mass distributions channels like radio, television and the print media to ensure this knowledge is leveraged to precipitate change on the ground. There needs to be a firm commitment to support alternate non-web outreach methods that make this knowledge accessible to all sections of society (the digital haves and have-nots).

An alternate IT technology can support those who do not have internet access. This calls for a locally resident tool that is run on a desktop PC which can provide information and run applications pertaining to specific topics. Since these applications are not relying on the internet or storing information at a distant server, they can be used locally at the site without network connectivity. Subsequently, it would be useful to be able to connect to a server to upload local data or download updates and information. These software thick client applications can be the source of bottom-up data, since NGOs and individuals can upload local data over the internet for analysis at a central server. This provides an alternative bottom-up way of collecting fine grained local data in a continuous manner.

The portal will thus address the needs of a very diverse spectrum of users from researchers and policy makers to local practitioners at the ground level who stand to benefit greatly from the comprehensive availability of information on a sector relevant for them in an open and transparent manner.

7. **Translate into Indian languages:** The portals should be translated into all Indian languages to reach a wider audience. Interactive applications and e-learning content must be made available in local languages for it to be relevant.

Based on these broad guidelines the following Portals have been initiated by various organizations supported by the NKC:

- **India Water Portal** is being developed by Arghyam Trust, a public charitable trust. Initiated in January 2006, the portal will be launched on the 12th of January 2007.

The portal seeks to create an open platform for sharing information and knowledge about the Water sector. The primary objectives of the portal are:

- Increase awareness and demystify various aspects of water management for general public.
- Share successful techniques and experiences amongst serious practitioners
- Provide a platform for information flows between multiple stakeholders.

Important features of the portal include:

1. **Domain Wikipedia/ Waterpedia-** Based on the Wikipedia (the user-driven free encyclopaedia), the Waterpedia is an online encyclopaedia for the water sector. The Waterpedia includes a comprehensive taxonomy covering diverse aspects of the Water sector as well as relevant sections on agriculture, ecosystems, policies and technologies.
2. **Best Practises/Case Studies-** This section is a repository of techniques and practices specific to the domain, in the IWP, users can contribute a proven water management practice or case-study in one of several categories, like Agriculture, Water Quality, Sanitation
3. **E-learning modules-** These consist of introductory instructional modules on the Water sector to create awareness amongst a general audience. For the IWP, some of the modules are the Water Cycle, Water Situation in India, Sanitation, Water-Borne diseases, Rainwater Harvesting, and Urban Water Scenario.
4. **Resource mapping-** Complex set of data on the water sector is presented through GIS maps. This primarily involves Government data from the many departments and agencies that are related to and responsible for delivering key services in the domain. It includes sectors like Agriculture, Sanitation, Power, Pollution Control Board, Ground Water apart from the Water Resource Ministry.
5. **Information on government role and projects-** Information on the various projects undertaken by the Government over the last few years in this domain. It includes Watershed schemes, Drinking Water projects, and Lake Rehabilitation projects.
6. **NGO Information-** The NGO Map Marker enables NGOs or institutions to mark themselves on an interactive map right down to the taluk or city level in a few easy steps. The user can thus get high-level information about the NGO as also search through the list of existing tags to find NGOs working on a specific theme, like Watershed Development or Water Quality etc.

Content can be developed and updated under each of these sections in a collaborative manner with requisite moderation for quality control.

- **India Energy Portal** is being developed along similar lines, with The Energy Research Institute (TERI) as the lead organization. The broad functions of the energy portal would include the following.
 - Identification of sources and providing essential knowledge on basic aspects of energy
 - Providing data and information in a comprehensive manner.
 - Enabling efficient and effective retrieval of information.
 - Maintaining and updating the knowledge repository.
 - Providing a platform for interaction and exchange of ideas.

India Energy Portal (IEP) is organized around the following themes:

- **Renewable energy:** Solar, Wind, Small hydro, Biomass, Geothermal, Waste to energy and other new technologies
- **Petroleum and natural gas**
- **Coal**
- **Power:** Thermal, Hydro, Nuclear, Transmission and Distribution
- **Distributed generation**
- **Energy efficiency and conservation:** Agriculture, Industry, Domestic, Rural, Transport

Each of these sections, besides providing basic level of understanding, has appropriate links to sites where one can get more details including that on specific terms (e.g. those available on Wikipedia). These are then backed up by the relevant case studies, articles, and papers.

Other features include:

1. **Knowledge Bank:** This section provides a database of information on energy statistics and energy maps, case studies, articles and papers and relevant documents which can be navigated with the help of user-friendly 'search' features.
 2. **Resources:** Provides access to a directory of energy experts, policies, presentations, as well as information on suppliers/manufacturers. Special attention has been paid on sections pertaining to children and tools such as design software and online resources.
 3. **Interactive sections:** live blogs, opinion polls, discussion with experts, posting of queries, and online e-courses are some of the interactive features of the portal.
- Preliminary work has begun on developing an **India Environment Portal** with the Centre for Science and Environment (CSE) as the champion organization.
 - Possible future portals include portals on Citizens Rights, Health, Employment, and Food.

We hope that the government will encourage the initiation of such national portals and support these initiatives by sharing data and information, providing financial assistance and being an active stakeholder in this process. We also hope that various ministries in the government will initiate and encourage public-private partnerships to launch relevant portals to spread information and knowledge to the public at large and at the same time improve transparency, access, democratization and utility.

Thank you and warm personal regards,

Sam Pitroda
Chairman, National Knowledge Commission.