

# MANUAL

## National Biotechnology/Biosafety Resources Database

[NBRdatabase]



### Client

Prof. Athula Perera  
Project Coordinator  
National Biosafety Framework Development Project, Sri Lanka  
"Parisara Piyasa"  
No 104, Robert Gunawardene Mawatha,  
Battaramulla  
SRI LANKA  
Telephone: +94-11-2861394  
Email: nbfs@sltnet.lk

### Developer

A.H.K. Balasooriya  
Consultant/ Computer Programmer  
National Biosafety Framework Development Project, Sri Lanka  
Telephone: +94-71-4900275  
Email: hbal@ou.ac.lk

### Sponsors

Global Environment Facility (GEF),  
United Nations Environment Programme (UNEP) and  
Ministry of Environment and Natural Resources, Sri Lanka

# **MANUAL**

## **National Biotechnology/Biosafety Resources Database [NBRdatabase]**

Prototype

### **Supervisors**

Prof. Athula Perera  
Project Coordinator  
National Biosafety Framework Development Project, Sri Lanka  
&  
Mr. Gamini Gamage  
Director  
Biodiversity Secretariat  
Ministry of Environment and Natural Resources, Sri Lanka

### **Developer**

Mr. A.H.K Balasooriya  
Consultant/Computer Programmer  
National Biosafety Framework Development Project, Sri Lanka

### **Assistance**

#### **Survey Team**

Ashoka Tillekarathne  
Narmada Herath  
Kumari Jayathilake  
Hiran Tillekarathne  
Pradeepa Ranaweera  
Dhammika Hettiarachchi  
Deepthi Molligoda

#### **Office Team**

Percy Ranasinghe  
Shankaja Uggalla  
Thishanthi Consal-korala  
Manoja Jayasekara  
E.M.M Ekanayake  
Amith Wimalarathne  
Chamila Damayanthi  
S.I. Rajapaksha  
L.H Aourasha

## **National Biotechnology/Biosafety Database**

The National Biotechnology/Biosafety Resources Database (NBRdatabase) is the only database available in Sri Lanka in the field of biotechnology and biosafety. The design and development processes took a period of six months with arduous work. An island-wide survey took a period of one year. Data was collected through administering 12 questionnaires to relevant persons. The survey team consisted of 9 graduate assistants. The survey was the main stream of providing data to the database application.

The database application has two basic components, namely the software application and database. The application is just a user-friendly computer program, which provides data for the purpose of extraction or browsing as required by the user. For example, if a particular user needs to find an expert who could handle the biotechnology equipment called "Gene gun", the application provides him information on the available experts with their brief biodata, addresses and contact numbers. (Please refer the database manual for details)

In the development of the application within the given short period of time, it was a challenge to identify the user requirements for the application. As a developer, I followed a holistic approach to identify the requirements. My steps were:

- a) Conduct group discussions and individual interviews with the experts in biotechnology and biosafety
- b) Draw a diagram and visualize a system derived from the information obtained from the discussions and make a presentation to the experts and members of the National Coordinating Committee (NCC) of the NBFSL project.
- c) Rearrange the design and requirements according to feedback from the experts and finalize the design with the project coordination members.

For keeping the cost under control and for efficiency, I used Microsoft Visual Foxpro version 6 as the computer programming language and its (Microsoft Foxpro) database for the software application under windows operation system.

The software-developing model was "throw-away prototype" (a workable system which is based on an advanced future system)

The application was developed under supervision of Professor Athula Perera, Coordinator, NBFSL Project and Mr. Gamini Gamage, Director, Biodiversity Secretariat, Ministry of Environment and Natural Resources, Sri Lanka. Their guidance and advice were very useful for developing the database.

Mr. A.H.K Balasooriya  
Consultant/Computer programmer: NBRdatabase  
25 July, 2005

## Contents

Title	Pages
1.0 Introduction	1
1.2 Conventions used	2
1.3 Getting started in the database	2
1.4 Permission levels	3
2.0 Master records	4
2.1 Mater record editor: Common properties	5
2.2 Updating/ deleting master records	5
2.3 Reports of master records	6
3.0 Main menu	7
3.1 Resources	7
3.1.1 Adding Expert/ Resource Person	8
3.1.1.1 Step 01: Enter Expert ID	8
3.1.1.2 Step 02: Expert personal details	9
3.1.1.3 Step 03: Office details of experts	10
3.1.1.4 Step 04: Research activities of experts	11
3.1.1.5 Step 05: Educational qualifications of experts	11
3.1.1.6 Step 06: Training details of experts	12
3.1.1.7 Step 07: Publications of experts	12
3.1.1.8 Step 08: Required trainings of experts	12
3.1.1.10 Step 09: Equipment usage of experts	12
3.1.1.11 Step 10: Experiences in techniques related to biotechnology	12
3.1.1.12 Step 11: Expertise areas in biotechnology / biosafety- Organisms	13
3.1.1.13 Step 12: Biotechnology related products	14
3.1.2 Editing available expert records	15
3.1.3 Search Experts	16
3.1.3.1 Search expert by research activities	17
3.1.3.2 Properties of expert search window	18
3.1.3.3 Search experts: Option window	18
3.1.3.4 Search experts by expertise areas	20
3.1.3.5 Search experts: Publications	27
3.1.3.5 Search experts: Training	29
3.1.3.6. Search experts: Experience in equipment usage	30
3.1.3.7 Search experts: Experience in techniques	33
3.1.4 Expert mailing labels	33

<b>3.2 Equipment</b>	<b>34</b>
3.2.1 Adding new equipment to an institute (laboratory)	35
3.2.2 Master Record: Laboratory equipment	36
3.2.3 Searching equipment	37
3.2.4 Equipment: Report	39
<b>3.3 Institutions</b>	<b>40</b>
3.3.1 Adding a new or editing an institution	41
3.3.2 Searching institutions	42
<b>3.4 Technologies</b>	<b>43</b>
3.4.1 Adding/editing technologies	43
3.4.2 Searching techniques/technologies	45
3.4.3 Technology report	46
<b>3.5 Policies and related aspects</b>	<b>47</b>
3.5.1 Adding new policy related aspects	47
3.5.2 Search policy related aspects	49
3.5.3 Reports on policy related aspects	50
<b>3.6 Regulatory instruments</b>	<b>51</b>
3.6.1 Adding new /editing legal instruments	51
3.6.2 Searching legal instruments	53
3.6.3 Legal instrument report	54
<b>3.7 Information</b>	
3.7.1 Adding/Editing databases	55
3.7.2 Reports	56
3.7.3 Library search	57

## Introduction

### 1.0 Introduction

The National Biotechnology/Biosafety Resources Database (NBRdatabase) is designed to cater to the data which was collected from an island-wide survey conducted by the National Biosafety Framework Development Project of Sri Lanka ([www.biosafety.lk](http://www.biosafety.lk)) from August 2003 to September 2004.

NBRdatabase is a user-friendly, simple application, which can be used by any person who has minimum computer skills.

The NBRdatabase has the following levels of users

1. General user

They will have limited access functions such as search for human and other resources and data necessary for report writing.

2. Administrative user

This user has complete control of all applications, which has the functionals such as 'add', 'edit' and 'update' in addition to general users' functions.

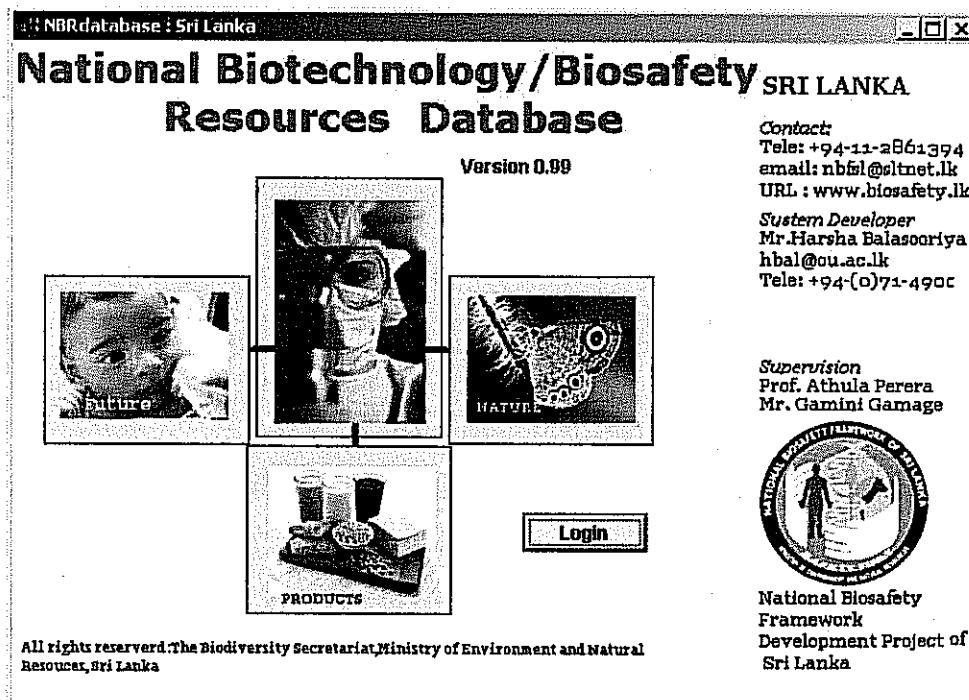


Figure 1: The startup window of the NBRdatabase