

our endemics, or at least the smaller species. If we have the political will, there is still time to prevent the worst excesses of the future, but time is short.

The Indonesian Ornithological Society, and its bulletin *Kukila*, may have played a major role in putting Indonesia on the ornithological map, and in attracting the interest that led to an upsurge of activities, during a period which saw the establishment of institutions such as Asian Wetland Bureau and BirdLife International Indonesia Programme. From what has been said above, it is clear that this is only a beginning. The following guest feature outlines some of the approaches being taken to tackle the urgent problems

Proposed changes to *KUKILA*

A composite index of the first ten years of *Kukila*, volumes 2-7, accompanies this issue. Readers are reminded that Volume 1 was a non-scientific bulletin, partly in the Indonesian language, published in the mid-1970s, that was inaugurated by the tiny body of far-sighted individuals who had first formed the ICBP Indonesian National Section. In the future, it is proposed to produce *Kukila* once yearly, as a single issue volume of approximately double the thickness of the current issues. It is intended to improve the standard of production, with the inclusion of photographs. Thus volume 8 will be equated with *Kukila* 1995.

D.A.H.

GUEST FEATURE

THE PHPA/BIRDLIFE INTERNATIONAL-INDONESIA PROGRAMME: GOALS AND APPROACHES.

by

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The PHPA/BirdLife-Indonesia Programme (IP) is a collaborative conservation programme between the Ministry of Forestry, Directorate General of Forest Protection and Nature Conservation (PHPA) and BirdLife International, formalised in an Agreement approved by the Secretariat Kabinet, Republic of Indonesia. This paper provides a brief digest of the goals, structure, approaches and activities of the programme.

BirdLife international is a global network of official bird conservation non-government organisations (NGOs), specialist groups and individuals working for the conservation of the world's birds and their habitats for the benefit of humankind. This movement currently includes national organizations over 50 countries which represent and share the identity of BirdLife.

Indonesia is one of the world's ten mega-diversity countries (McNeely *et al.* 1990). In terms of bird species it is the fourth most diverse country in the world; according to Andrew (1992, 1993) 1539, or 17% of the approximately 9,198 described species of bird (Clements 1981), have occurred in the Republic. This is 300 species more than India, which is the next most diverse Asian country.

Indonesia is custodian of more endemic bird species than any other nation. A figure of 381 endemic species compares with 351 for Australia, 191 for Brazil and 172 for the Philippines. Through an analysis of the distribution of species with restricted-range (ICBP 1992) BirdLife identified areas of the globe supporting concentrations of unique species which have been termed Endemic Bird Areas; there are 221 world-wide and with 24 Indonesia has highest number of any nation.

The latest review of threatened bird species (Collar *et al.* 1994) classifies 104 Indonesian species (63 of which are endemic) as threatened according to IUCN threat categories. Again this is the highest number for any nation, although Indonesia has fewer species in the top two threat categories (critical and endangered) than Brazil, the Philippines, Columbia and USA.

On account of these facts, and the absence of established national bird conservation NGO, BirdLife and PHPA developed a joint conservation programme in 1992.

The collaborative programme has as its mission to: *promote the integration of bird and biodiversity conservation -with national and local development through a collaborative programme of field and planning projects, and to develop an expert Indonesian human resources base to further this mission in the long-term*

To further this mission the BirdLife-IP, which currently employs around 15 staff, is structured into three sections: information and policy; field projects; and finance and administration. The activities of the first two are discussed in this paper.

Information and policy.

The BirdLife-IP works on the premise that, in a nation as extensive and diverse as Indonesia, an understanding of priority sites for the conservation of national and global biodiversity is essential for the effective targeting of scarce conservation resources. It is underpinned by Article 6 of the Convention on Biological Diversity which was ratified by the Indonesian Government on 1 August 1994, and which states :

Contracting parties will: a) develop national strategies, plans or programmes for the conservation and sustainable use of biological diversity; b) integrate as far as possible and as appropriate the conservation and sustainable use of biological diversity into relevant sectoral or cross-sectoral plans, programmes and policies (Kapoor-Vijay 1992).

Using birds as rapid indicators of overall biodiversity, the collaborative programme identifies priorities in terms of species richness, levels of endemism and degrees of threat; A employs the three pillars of the BirdLife conservation strategy namely: Endemic Bird Areas (EBAs); Threatened species; and Important Bird Areas (IBAs) The programme is gathering conservation related data on Indonesian bird species and disseminating these in formats appropriate to the needs of Indonesian decision makers and conservation biologists.

Putting Biodiversity on the Map (ICBP 1992) provides the most comprehensive survey to date on the location of centres of global bird endemism. and available evidence suggests that EBAs correlate well with high levels of endemism in other groups. The PHPA/BirdLife-IP is preparing to disseminate information on the location of Indonesian EBAs, the potential impact of national development plans and priority actions for conservation of the unique species assemblages they represent in the form of a graphical directory to be published later in 1995. This will directly target provincial government agencies, scientists and NGOs.

In 1994 the collaborative programme reviewed current information on the status of species at risk in Indonesia. This formed the basis of the Indonesian species entries in *Birds to Watch 2* (Collar *et al* 1994). An abridged and adapted version of this publication titled *Burung-burung terancam punah di Indonesia* (Shannaz & Jepson, in prep.) will be published jointly by PHPA and BirdLife in mid-1995 and distributed to local offices of PHPA, the Ministry of the Environment and to Environmental Study Centres located at provincial universities.

The current list of 104 threatened species includes 29 which were not identified as threatened in the first checklist of threatened species (Collar & Andrew 1989) and 51 species have been removed (Shannaz & Jepson, in prep.)- This reflects the application of more objective criteria, the recent advance made in Indonesian ornithology and also the greater depth that an in-country conservation programme is able to bring to such reviews. However, the data set on threatened bird species in Indonesia is still inadequate and the current list is viewed as a candidate for a more detailed review which is being conducted as part of the BirdLife *Threatened Birds of Asia* project current from 1994-1999. This work will form a core activity of the policy and information section over the next years.

As conservation planning and priority setting tools the EBA and threatened species approaches have important limitations, the former on account of the focus on species with restricted-range and the latter by virtue of the focus on the very rare. To overcome such limitations BirdLife has developed the Important Bird Area approach. An IBA is defined as a site; supporting globally threatened species; where seabird and/or waterfowl species congregate in important numbers; supporting species of restricted range, with a bird community or assemblage characteristic of and restricted to avifaunal zones or biomes which lack EBAs; with important populations of species

declining in a biogeographic region. The PHPA/BirdLife-IP has embarked on the process of identifying IBAs in Indonesia, a task which once completed will provide ornithologist, conservations NGO's and government like with a blueprint for integrating conservation with national development.

Although the above are core activities, they do not fully represent the breadth of work of the mformation and policy section. A key output in 1995 was the BirdLife recommendations for additional Indonesian protected areas (Sujatnika & Jepson 1995) which was prepared fix a workshop to up-date the *Review (Protected Areas in the Indo-Malayan Realm* (MacKinnon 1986) held in Cisarua 23-25 January 1995. Other important outputs scheduled for 1995 are a fist of Indonesian bird names, and an Indonesian translation of the *Field Guide to the Birds of Sumatra. Borneo, Java & Bali* (MacKinnon. & Philips 1994).

Field Programme

Field projects of the collaborative programme address the most urgent conclusions of the above priority setting exercises. The results of ICBP (1992) underpin the geographic focus of our field programme in Indonesia. The island provinces of Maluku and Nusa Tenggara encompass 8 EBAs supporting 144 endemic species, bin have a poorly devaloped terrestrial protected area network. Indeed Maluku province, with 90 endemic species grouped is 6 EBAs, has just one, a terrestrial protected area of significant size that has been formalized by ministerial decree Manusela National Park.

Field projects fall into two groups, those concerned with protected area development and those focusing on conservation of threatened specied. These are dealt with under separate headings.

Protected Areas

A comprehensive protected area network was proposed in the National Conservation Plan (FAO/UNDP 1982) and many of the areas were reserved for protected area establishment in the TGHK (Tataguna Hutan Kesepatan - revised forest zoning and land use planning - see RePPPProT 1991). Eastern Indonesia is targeted for development in Repelita VI (the government's sixth five-year development plan) and facilitating the formal establishment of key reserves in Maluku and Nusa Tenggara as integral components of island development is the main focus of the field programme.

To date the programme has evaluated boundaries for a protected area on Yamdena, the principle island in the Banda Sea Islands EBA (Jepson 1995), identified a network of six critical forest areas on Sumba for the protection of forest values and the assemblage of 8 bird species unique to this single island EBA, and published a report evaluating protected area needs on Sumbawa (Jepson & Monk 1995). Since mid-1994 a multi-agency survey team lead by BirdLife has been evaluating the proposed Ake Tajawe and Lalobata protected areas on Halmahera. In the second half of 1995 the team plans to move to Buru and then to Kai Besar and Taliabu in 1996.

These field projects are designed to collect and collate the necessary information to support the gazettement of new reserves. Through the BirdLife Ambon field office the project aims to facilitate liaison and coordination between the various provincial departments and institutions involved in the procedure with the view to reaching agreement on boundaries and gaining the recommendation of the Governor.

The biological survey team employs a basic quadrat sampling method. Within each habitat type, data is collected on birds and forest structure. A bird species inventory is made for each habitat class in order to calculate diversity indices and compare species richness by habitat type. Quantitative data on bird densities is collected by applying Distance sampling methods, such as variable circular plot (Buckland *et al.* 1993) to compare densities of key species by habitat and estimate the minimal area required for viable populations. A vegetation description is prepared for each habitat type, and botanical expertise from the Faculty of Forestry (Pattimura University) in Maluku and Universitas Katholik Wilayah (NTT) ensures that representative plant communities are covered by proposed reserves.

A socio-economic survey team led (in Mahiku) by the local NGO Yayasan Hualupu, targets villages and communities identified during the preparatory phase. They employ standard participatory rural appraisal techniques to understand community structure, the village economy, interrelationships with the proposed reserve, and to identify possibilities for future community-based reserve management.

This description would not be complete without reference to the important contribution of LIPI (the Indonesian Institute of Sciences) and BirdLife sponsored British/Indonesian student expeditions to the programme. The 1988 and 1992 Manchester Metropolitan University Sumba and Buru expeditions, the 1991 University of East Anglia Taliabu expedition, the 1993 Cambridge University Sumbawa/Flores expedition and the 1994 Bristol University Halmahera expedition have all contributed essential data to the design and scope of PHPA/BirdLife protected area projects. Furthermore a number of Indonesian participants on these expeditions are now staff members of the BirdLife-IP. Future ground-breaking expeditions planned for south-east Sulawesi (University of Leeds), Sangihe-Talaud (University of York) and Timor & Roti (University of East Anglia) will continue this productive collaboration.

Threatened Species

Saving birds from extinction has been a central tenet of BirdLife since its inception (as the International Council for Bird Preservation) in 1922. Since 1983, the organisation has been involved in collaborative efforts to conserve the remaining wild population of the Bali Starling *Leucopsar rothschildi* which is confined to a small area of monsoon forest in the Bali Barat National Park. In 1992 the emphasis of the Bali Starling project moved towards developing capacity within the staff of the national park to become self-sufficient in guarding and patrolling, population monitoring and research, education and awareness, and captive breeding for release, which are integrated components of Bali Starling conservation. Although the species remains perilously close to extinction (a population of 22-28 birds at the last census in October 1994), the

process of transferring lead responsibility for the project is under-way with the finalization of a species recovery plan, and the BirdLife-IP is stepping back into an advisory supporting role.

The collaborative programme is working to address recommendations of the Animals Committee of CITES (Convention on trade in endangered species) with respect to status assessments of significantly traded species. PHPA/BirdLife conducted status assessments of Tanimbar Corella *Cacatua goffini* and Blue-streaked Lory *Eos reticulata* in conjunction with surveys of the proposed reserve on Yamdena. Both species were considered threatened (Collar & Andrew 1989) on the basis of their restricted-range and the size of annual export figures (averaging 10,000 for *C. goffini*), and on account of this an American proposal to place *C. goffini* on Appendix 1 was passed at the meeting of the CITES parties in 1991. The status assessment presented the heartening conclusion that, contrary to previous assumptions, both species are still common. Populations in excess of 200,000 were estimated for *C. goffini* and *E. reticulata* and the surveys confirmed that flocks of *goffini* raid village maize crops (Cahyadin *et al.* 1994a). The report suggested that past harvest levels had not caused a significant population decline because Corellas were only caught when they were raiding crops, while these feeding flocks comprised a large proportion of non-breeding immature and juvenile birds.

The Yellow-crested Cockatoo *Cacatua sulphurea* is another species which has been quite heavily traded on international and domestic markets. This species has a wide distribution covering Sulawesi and Nusa Tenggara with an isolated sub-species on the Maselembo islands in the Java Sea; a status assessment employing standardised survey methodologies is obviously impractical for an area of this size. In order to quickly gain a general picture of the species status, the PHPA/BirdLife-IP drew on rapid rural appraisal techniques and conducted semi-structured interviews with farmers and villagers throughout South Sulawesi province, Sumbawa and on the Maselembo islands. The results of these surveys indicate a severe population decline across the species range and widespread local extinctions (Cahyadin *et al.* 1994b, 1994c, Setiawan *et al.* in prep). Prior to these surveys the Sumba sub-species *citrinocristata*, was widely thought to be the most threatened population; the survey results suggest that Sumbawa, along with Sumba and Komodo, may support the strongest remaining populations of the species. The reasons for this decline are not clear but may result from efficient catching techniques using glued sticks which enable whole flocks to be caught at communal roosts. In 1994 the PHPA placed a moratorium on exports of the species pending the final out-come of this survey programme.

The collaborative programme is conducting status assessments of other parrot species during reserve evaluations, for example: Violet-necked Lory *Eos squamata*. Chattering Lory *Lorius garrulus* and White Cockatoo *Cacatua alba*, on Halmahera, and Eclectus Parrot *Eclectus roratus* on Sumba, Yamdena and Halmahera. A component of the 1995 Bum surveys will be to search for the endemic Blue-fronted Lorikeet *Charmosyna toxopei* and Black-lored Parrot *Tanygnathus gramineus* which have not been conclusively recorded for fifty years.

Future threatened species field projects will be integrated with the *Threatened Birds of Asia* project. The programme will facilitate base-line surveys of little known species about which there is concern, and management-orientated surveys and studies of species which are known to be endangered.

Human resource development

The sustainability of these initiatives, and indeed the long-term future of bird conservation in Indonesia, is dependant on developing a professional cadre of Indonesian conservationists. Indeed, for BirdLife International success in Indonesia means passing over the international programme to a future Indonesian partner of BirdLife. The collaborative programme therefore places a high emphasis on developing a national capability in bird conservation, which embraces organisational and project management, communication and fund-raising as well as ornithology.

This is approached in a number of ways. First, the Indonesia Programme has a policy, wherever possible, to employ Indonesian staff and train them in areas where they may lack the necessary skills or experience. The author is one of only two full time expatriate staff employed on the programme.

Through the IBA project the programme is reaching out to students. Twenty-eight bird and nature clubs at universities in Java and Bali are participating in IBA identification. The collaborative programme is providing training in site evaluation and bird survey techniques, and hopes to initiate a national network of bird conservation clubs.

The programme also works to enhance understanding of bird conservation techniques and issues within government agencies, particularly with our collaborating agency PHPA. This takes the form of presentations, reports, technical memoranda, participation in workshops and of course one-to-one meetings and discussions. In the field the collaborative programme seeks to involve other agencies in our projects. For example the Maluku field team includes a local rural development NGO (Yayasan Hualopu) which conducts the socio-economic evaluations, and the Forestry Faculty at the Pattimura University, Ambon, which covers the botanical aspects of the project.

Conclusion

This paper has summarised the goals and activities of the PHPA/BirdLife - Indonesia Programme in its third year of existence. It has shown that the programme has a priority driven agenda based on sound research, and is concerned with the development of conservation capacity in Indonesia as well as addressing global conservation priorities. BirdLife's strength has in an ability to activate a network of individuals and agencies with common concerns. In Indonesia we are compiling, analysing and disseminating base-line information on the status and distribution of sites and bird species as a component of conservation planning in Indonesia. We cannot succeed in this worthy task without the enthusiastic support of our network. We hope that *Kukila* readers will become active participants of this network, by submitting records, surveying little know areas and generally supporting the work of the programme.

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