

Proof Delivery Form

Animal Genetic Resources Information

Date of delivery: 05.10.2010

Journal and vol/article ref:

agr

47/AGR1000092

Number of pages (not including this page): 5

This proof is sent to you on behalf of Cambridge University Press. Please print out the file and check the proofs carefully. Make any corrections necessary on a hardcopy and answer queries on each page of the proofs.

Please return the **marked proof** within

2

days of receipt to:

**Wendy Gater,
Journals Production,
Cambridge University Press
Shaftesbury Road
Cambridge CB2 8RU**

To avoid delay from overseas, please send the proof by airmail or courier.

If you have no corrections to make, please email

wjgater@cambridge.org

to save having to return your paper proof. If corrections are light, you can also send them by email, quoting both page and line number.

- You are responsible for correcting your proofs. Errors not found may appear in the published journal.
- The proof is sent to you for correction of typographical errors only. Revision of the substance of the text is not permitted, unless discussed with the editor of the journal.
- Please answer carefully any queries listed overleaf.
- A new copy of a figure must be provided if correction of anything other than a typographical error introduced by the typesetter is required.

- If you have problems with the file please contact

wjgater@cambridge.org

Please note that this pdf is for proof checking purposes only. It should not be distributed to third parties and may not represent the final published version.

Important: you must return any forms included with your proof. We cannot publish your article if you have not returned your signed copyright form



AUTHORIZATION TO PUBLISH CONTRIBUTION

The Food and Agriculture Organization of the United Nations

Viale delle Terme di Caracalla, 00153 Rome, Italy
(hereinafter referred to as 'FAO')

and

[NAME(S) OF AUTHOR(S) OR COPYRIGHT OWNER]

hereby agree as follows:

Whereas FAO intends to publish a journal provisionally entitled:

Animal Genetic Resources Information

(hereinafter referred to as the 'Work')
with a contribution from:

[NAMES OF AUTHORS]
(hereinafter referred to as 'the Author(s)')

[DESCRIPTION]

provisionally entitled:

[TITLE OF CONTRIBUTION]
(hereinafter referred to as 'the Contribution')

Article 1 – Warranty

- (a) The Author asserts that the Contribution is original and contains no violation of any existing copyright or other third party right or any material of an obscene, libellous or otherwise unlawful nature, and that they will indemnify, and keep indemnified, FAO against all claims and expenses (including legal costs and expenses) arising from any breach of this warranty.

- (b) The Author asserts that they have obtained permission for and acknowledged the source of any illustrations, diagrams or other material included in the Contribution of which they are not the copyright owner.
- (c) The Author asserts that any co-authors of this Contribution are aware of, and in agreement with, the terms of this agreement and that the submitted Contribution has been approved by these authors.

Article 2 – Manuscript delivery and publication

- (a) The Author agrees to deliver the Contribution in the format requested by FAO, and to edit/revise it as agreed between themselves and FAO. FAO undertakes to publish the book expeditiously. The Author will be supplied with proofs of their contribution prior to publication, and asked to return these within a specified time-frame for correction. If author corrections exceed 10% of typesetting costs, they may be charged for these.
- (b) The Work may be published by FAO, or copublished with another publisher. The Work may be distributed freely, or sold by FAO and/or a copublisher.
- (c) FAO may make use of the Contribution, in full or in part, within other works and in other media, or license others to do the same, without the consent of the Author.

Article 3 – Author rights

- (a) FAO authorizes the Author to re-use the Contribution, in full or in part, in subsequent non-commercial and commercial works of which the Author is the author or editor, provided that the original publication is acknowledged, and that FAO is recognized as the copyright owner (if copyright has been assigned). The Author is required to inform FAO of any such re-use of the Contribution.
- (b) The author may re-use the Contribution, in full or in part, for non-commercial teaching or research purposes.
- (c) The Author retains their moral rights in the Contribution, including the right to be identified as the Author whenever and wherever the Contribution is published.

Article 4 – Termination

- (a) If FAO considers the Contribution to infringe any warranty, or that it is not of the standard, character or length that has been agreed or might reasonably be expected, it reserves the right to decline to publish and to terminate this agreement forthwith, or to require the author to make revisions that FAO deems necessary.
- (b) If the Work is not published within a reasonable time-frame, either the Author or FAO may terminate this agreement.
- (c) Any termination of this agreement must be in writing.
- (d) If this agreement is terminated, all rights revert to the Author (or other copyright owner).

Article 5 – FAO general conditions

- (a) *Immunity.* Nothing in this Agreement or relating thereto shall be construed as constituting a waiver of privileges or immunities of FAO, or as conferring any privileges or immunities to the Author.
- (b) *Applicable Law and Settlement of Disputes.* This Agreement and any dispute arising therefrom shall be governed by general principles of law, to the exclusion of any single national system of law. Any dispute, controversy or claim arising out of or in relation to this Agreement shall be settled by mutual agreement between the parties. If the parties are unable to reach an agreement on any question in dispute or on a mode

of settlement other than arbitration, either party shall have the right to request arbitration in accordance with the Arbitration Rules of the United Nations Commission on International Trade Law (UNCITRAL) as at present in force. The parties agree to be bound by any arbitration award rendered in accordance with the above-mentioned rules as the final adjudication of any such dispute.

- (c) *Indemnities.* Each party shall promptly inform the other of any claim made against either party, which, if sustained, would constitute a breach of any warranty made by the Author to FAO in this Agreement. The Author shall defend any such claim with counsel of its own selection. The above is without prejudice to the privileges and immunities of FAO.

Article 6 – Copyright assignment

- 1. FAO asks that the copyright owner grants to FAO full copyright in the Contribution. (It is assumed that the Author is also the Copyright owner, if not, the copyright owner must sign this section.)

I (the copyright owner) hereby assign to FAO copyright in the above Contribution, for the full period of copyright throughout the world in any form and in any language (including all media, now known or later developed). FAO may license others to do the same and may assign its rights under this Agreement.

Signed:

Name:

Date:

- 2. If the copyright owner is unable to grant to FAO full copyright in this Contribution, FAO requires exclusive licence to publish the Contribution. (It is assumed that the Author is also the Copyright owner, if not, the copyright owner must sign this section.)

I (the copyright owner) hereby assign to FAO exclusive licence to publish the above Contribution or any part of the Contribution, for the full period of copyright throughout the world in any form and in any language (including all media, both now known or later developed), and to license others to do the same. FAO may assign its rights under this Agreement.

Signed:

Name:

Date:

Author Queries

Journal: AGR (Animal Genetic Resources Information)

Manuscript: S2078633610000925jra

- Q1** Please confirm running title as edited
- Q2** Please confirm citation of FAO (2007) here
- Q3** Please confirm changes made in this sentence
- Q4** Please confirm citation of FAO (2009) here
- Q5** Please confirm “CBD” as the abbreviation of “Convention on Biological Diversity”
- Q6** Please confirm changes made in this sentence
- Q7** Please provide full form of IPR
- Q8** Please provide full form of CSO
- Q9** Please confirm change of “LIFE-Network” to “LIFE Network” here
- Q10** Please provide publisher and place for “Lokhit Pashu-Palak Sansthan & Kohler-Rollfson (2005)” and “UNEP & Natural Justice (2009)”

Livestock keepers' rights: the state of discussion

I.U. Köhler-Rollefson¹, E. Mathias¹, H. Singh², P. Vivekanandan³ and J. Wanyama⁴

¹League for Pastoral Peoples and Endogenous Livestock Development, Pragensstr. 20, 64372 Ober-Ramstadt, Germany;

²Lokhit Pashu-Palak Sansthan, P.O. Box 1, Sadri 306702, District Pali, Rajasthan, India; ³SEVA 45, T.P.M. Nagar, Virattipathu, Madurai 625 010, Tamil Nadu, India; ⁴LIFE Network Africa, P.O. Box 38469, 00632 Nairobi, Kenya

Summary

Livestock keepers' rights (LKR) is a concept developed by civil society during the "Interlaken process" and is advocated for by a group of non-government organizations, livestock keepers, pastoralist associations and scientists who support community-based conservation of local breeds. This study provides an overview of the rationale, history and content of LKR and suggests that biocultural or community protocols are a means of invoking the principles of LKR even in the absence of their legal enshrinement. It is concluded that besides striving for legal codification of LKR its principles should form the basis of pro-poor and ecological livestock development in general.

Keywords: *livestock keepers' rights, biocultural protocols, international regime on access and benefit-sharing, guidelines*

Résumé

Le concept des droits des éleveurs a été développé par la société civile au cours du «processus d'Interlaken». Ils sont défendus par un groupe d'organisations non gouvernementales, d'éleveurs, d'associations de pasteurs et de scientifiques qui soutiennent la conservation des races locales au niveau communautaire. Le présent document fournit une vue d'ensemble de la justification, de l'histoire et des contenus des «droits des éleveurs» et suggère que les Protocoles bioculturels ou communautaires représentent un moyen pour invoquer les principes de ces droits même s'ils ne sont pas juridiquement garantis. Le document arrive à la conclusion qu'en plus de s'efforcer d'atteindre la codification juridique des droits des éleveurs, il faudrait utiliser leurs principes de façon générale en tant que base pour le développement de l'élevage écologique et en faveur des pauvres.

Mots-clés: *droits des éleveurs, protocoles bioculturels, Régime international relatif à l'accès et au partage des avantages, lignes directrices*

Resumen

Los derechos de los propietarios de Ganado es un concepto desarrollado por la sociedad civil durante el "proceso de Interlaken" y es defendido por un grupo de organizaciones no gubernamentales, propietarios de ganado, asociaciones de pastores nómadas y científicos que apoyan una comunidad basada en las razas locales. Este trabajo proporciona una visión general del fundamento, historia, contenido de los "Derechos de los propietarios de ganado" y sugiere que los protocolos bioculturales y de la comunidad son un medio para invocar los principios de los derechos de los propietarios de ganado; incluso en ausencia de su materialización legal. Se concluye que, además de luchar por la articulación legal de los derechos de los propietarios de ganado, sus principios deben ser la base en beneficio de los pobres y el desarrollo ecológico del ganado en general.

Palabras clave: *Derechos de los propietarios del ganado, Protocolos bioculturales, régimen internacional sobre el acceso y el reparto de beneficios*

Submitted 23 March 2010; accepted 17 June 2010

Introduction

Livestock keepers' rights (LKR) is a concept developed by civil society (including non-government organizations and herders' associations) during the "Interlaken process", the run-up to the First International Technical Conference on Animal Genetic Resources held at Interlaken by the Food and Agriculture Organization of the United Nations

(FAO) in September 2007 (FAO, 2007). They are advocated for by a group of non-government organizations, livestock keepers, pastoralist associations and scientists who support community-based conservation of local breeds and form the LIFE (Local Livestock For Empowerment of Rural People) Network. LKR are based on the rationale that many breeds in developing countries disintegrate owing to the loss of the traditional rights of livestock keepers to sustain their livestock on common property resources, as well as policies that are adverse to small-scale livestock keepers. LKR are a set of principles

Correspondence to: I.U. Köhler-Rollefson, Lokhit Pashu-Palak Sansthan, P.O. Box 1, Sadri 306702, District Pali, Rajasthan, India. email: ilse@pastoralpeoples.org

that – if implemented – would support and encourage livestock keepers to continue making a living from their breeds and thereby achieve the combined effect of conserving diversity and improving rural livelihood opportunities.

Origin and history of LKR

The term LKR was first coined and promoted by civil society organizations during the World Food Summit held in 2002. The expression was an allusion to farmers' rights, which had just been legally enshrined in the International Treaty on Plant Genetic Resources for Food and Agriculture (ITPGRFA). At this point in time, the discussion around animal genetic resources had not yet picked up the enormous importance of livestock keepers in the management of animal genetic resources; in fact, livestock keepers were not even regarded as stakeholders. Having based their argumentation on anthropological rather than animal science data, the proponents sought to emphasize the fact that many traditional livestock keeping communities, especially pastoralists, have developed highly sophisticated knowledge systems and social mechanisms for managing their genetic resources (Lokhit Pashu-Palak Sansthan and Köhler-Rollefson, 2005). Arguing that livestock keepers were indispensable to animal genetic resource management, they claimed that LKR and an equivalent to the ITPGRFA were needed to ensure the sustainable management of animal genetic resources.

Cornerstones of LKR

For the purpose of adding substance to the term LKR, the LIFE Network organized a series of consultations and workshops with representatives of livestock keeping communities and support non-government organizations (NGOs) in Karen (Kenya) in 2003, Bellagio (Italy) in 2006, Yabello (Ethiopia) in 2006, and Sadri (India) and Addis Ababa (Ethiopia) in 2007. Hundreds of livestock keepers representing more than 20 countries participated in these gatherings and identified the threats that undermine the ability of pastoralists and small-scale livestock keepers to continue acting as stewards of domestic animal diversity. In the process, seven key elements or “cornerstones” of LKR were identified that would support small-scale livestock producers to continue maintaining their breeds.

Cornerstones of LKR (Köhler-Rollefson, Rathore and Mathias, 2009)

1. Recognition of livestock keepers as creators of breeds and custodians of animal genetic resources for food and agriculture.
2. Recognition of the dependency of the sustainable use of traditional breeds on the conservation of their ecosystems.
3. Recognition of traditional breeds as collective property, products of indigenous knowledge and cultural expression.
4. Right of livestock keepers to breed and make breeding decisions.
5. Right of livestock keepers to participate in policy-making processes on animal genetic resources issues.
6. Support for training and capacity building of livestock keepers and provision of services along the food chain.
7. Right of livestock keepers to participate in the identification of research needs and research design with respect to their genetic resources so as to ensure compliance with the principle of prior informed consent.

LKR at Interlaken

During the First International Conference on Animal Genetic Resources held at Interlaken (Switzerland) in September 2007, the African region promoted the inclusion of LKR in the Global Plan of Action for Animal Genetic Resources (GPA), but this was opposed by the European and North American regions. As a compromise, the GPA recognizes that “in some countries, livestock keepers have specific rights, in accordance with their national legislation, or traditional rights, to these resources”, and that “policy development should take into account . . . the rights of indigenous and local communities, particularly pastoralists, and the role of their knowledge systems”. Furthermore, some of the cornerstones are reflected in the GPA. In particular, Strategic Priority No. 5 emphasizes an agro-ecosystems approach to conservation, while Strategic Priority No. 6 focuses on support to “indigenous and local production systems and associated knowledge systems, of importance to the maintenance and sustainable use of animal genetic resources” and recommends various services for livestock keepers, as well as integration of traditional knowledge with scientific approaches, the development of niche markets for products derived from indigenous and local species and breeds, and strengthening of associated knowledge systems. Q3

Subsequently, at the 34th session of the FAO Conference, the issue of LKR was raised again (this time by the government of Brazil) and FAO was requested to look into the “important role of small-scale livestock keepers, particularly in developing countries, as custodians of most of the world’s animal genetic resources for food and agriculture in the use, development and conservation of livestock resources”. The Commission for Genetic Resources for Food and Agriculture (CGRFA) was tasked with addressing this issue in its report to the 35th session of the FAO Conference in 2009 (FAO, 2009). Q4

The Kalk Bay Workshop

In December 2008, the LIFE Network organized a consultation with African lawyers in Kalk Bay (South Africa) to brainstorm on how to advance the cause of LKR in the

127 absence of an ongoing international policy process and
 128 how to express the cornerstones in legal language. At
 129 this juncture, the legal experts deduced that most of the
 130 components of LKR were actually already explicitly or
 131 implicitly endorsed by a number of existing legal frame-
 132 works and international agreements. Among the most
 133 important of these is the legally binding Convention on
 134 **Q5** Biological Diversity (CBD), which commits its contracting
 135 parties in its paragraph 8j to “subject to national legis-
 136 lation, respect, preserve and maintain knowledge, inno-
 137 vations and practices of indigenous and local
 138 communities embodying traditional lifestyles relevant for
 139 the conservation and sustainable use of biological diversity
 140 and promote their wider application with the approval and
 141 involvement of the holders of such knowledge, inno-
 142 vations and practices and encourage the equitable sharing
 143 of the benefits arising from the utilization of such knowl-
 144 edge innovations and practices”. Another supporting inter-
 145 national agreement is the UNESCO Convention on the
 146 Protection and Promotion of the Diversity of Cultural
 147 Experiences, which gives recognition to the distinctive
 148 nature of cultural activities as vehicles of identity, values
 149 and meaning. Only the right to breed is not specifically
 150 mentioned in any existing law.

151 The legal experts also concluded that the “cornerstones”
 152 should be disaggregated into three overarching principles
 153 and five specific rights.

154 Principles:

- 155 1. Livestock keepers are creators of breeds and custodians
 156 of animal genetic resources for food and agriculture.
- 157 2. Livestock keepers and the sustainable use of traditional
 158 breeds are dependent on the conservation of their
 159 respective ecosystems.
- 160 3. Traditional breeds represent collective property, pro-
 161 ducts of indigenous knowledge and cultural expression
 162 of livestock keepers.

163 Livestock keepers have the right to:

- 164 1. make breeding decisions and breed the breeds they
 165 maintain;
- 166 2. participate in policy formulation and implementation
 167 processes on animal genetic resources for food and
 168 agriculture;
- 169 3. appropriate training and capacity building and equal
 170 access to relevant services enabling and supporting
 171 them to raise livestock and to better process and market
 172 their products;
- 173 4. participate in the identification of research needs and
 174 research design with respect to their genetic resources,
 175 as is mandated by the principle of prior informed
 176 consent;
- 177 5. effectively access information on issues related to their
 178 local breeds and livestock diversity.

179 The three principles and five rights were compiled into a
 180 “Declaration on Livestock Keepers’ Rights”, which puts

181 them in the context of existing legal frameworks (LIFE
 182 Network, 2009). The declaration also clarifies the term
 183 “livestock keeper”, breaking it down into two specific
 184 groups: traditional or *indigenous livestock keepers* repre-
 185 senting those communities who have a longstanding cul-
 186 tural association with their livestock and have developed
 187 their breeds in interaction with a specific territory or land-
 188 scape and modern “ecological livestock keepers” as those
 189 who sustain their animals and the environments, where
 190 these animals live, relying largely on natural vegetation
 191 or home-grown fodder and crop by-products and without
 192 artificial feed additives.

Q6

193 Current status

194 LKR are frequently referred to as a potential tool for pro-
 195 tecting the rights of livestock keepers in a situation where
 196 scientists and industries make increasing use of the IPR
 197 system to protect their advances in breeding and associated
 198 technologies (Tvedt *et al.*, 2007). Some countries have
 199 expressed support for the concept of LKR, but it remains
 200 controversial, and there is currently no ongoing policy pro-
 201 cess in which they would become formally enshrined
 202 (CGRFA, 2009). As a result, livestock keeping commu-
 203 nities and their supporters are developing new tools that
 204 protect the rights of livestock keepers and especially sup-
 205 port them in traditional ways of life that are a prerequisite
 206 for the conservation of local breeds.

Q7

207 Biocultural protocols

208 Biocultural community protocols (BCPs) put on record the
 209 role of a community and its traditional knowledge in stew-
 210 arding biological diversity. They are a legal tool that was
 211 recently developed in response to the need for fair and
 212 equitable benefit-sharing agreements under the CBD
 213 (UNEP and Natural Justice, 2009). Establishing a biocul-
 214 tural protocol involves a facilitated process in which a
 215 community reflects about and puts on record its role in
 216 the management of biological diversity, not only its live-
 217 stock breeds but also its contribution to general ecosystem
 218 management. In addition, and maybe even more impor-
 219 tantly, the community is also made aware of existing
 220 national and international laws – such as the CBD – that
 221 underpin the right to *in situ* conservation. The three-part
 222 process – documenting, reflecting and learning about
 223 rights – can be enormously empowering for a community.
 224 The first livestock keeping community that developed a
 225 BCP was the Raika of Rajasthan in India (Raika Samaj
 226 Panchayat, 2009). Since then several other communities
 227 have followed suit, including the Lingayat of Tamil
 228 Nadu in India, the Pashtoon Baluch in Pakistan and the
 229 Samburu in Northern Kenya. The Raika are using the
 230 BCP to contest their customary grazing rights in certain
 231 forest areas from which the Forest Department is trying
 232 to expel them.

190 While BCPs have met with great interest among commu-
 191 nities, the approach is not without challenges. It requires
 192 a skilled mediator that the community trusts, such as a
 193 **Q8** CSO, an NGO or an individual and with which it has a
 194 strong rapport. Establishing a BCP can and should not
 195 be done quickly or rushed, because then there may be a
 196 danger that a written document will be produced that is
 197 not really backed by the community. An important point
 198 is that although BCPs were conceptualized in the context
 199 of the debate on access and benefit-sharing, their relevance
 200 for livestock keepers relates more to the part of paragraph
 201 8j of the CBD, which commits states to protect traditional
 202 knowledge and support *in situ* conservation.
 203
 204

206 Community protocols in the CBD process

207 Community protocols are explicitly referred to in the draft
 208 text for the International Regime on Access and
 209 Benefit-sharing (IRABS) that will regulate all access to
 210 genetic resources and traditional knowledge and is
 211 expected to be agreed upon as a legally binding framework
 212 during the tenth Convention of the Parties to the CBD to
 213 be held in Nagoya in 2010. IRABS is also expected to pro-
 214 vide communities with the option to opt out of the patent
 215 system – something they cannot do at the moment.
 216 However, in order to do so, communities first need to
 217 make visible their role as stewards of biological diversity
 218 and for this purpose BCPs are a crucial tool.
 219
 220

222 Code of conduct/guidelines

224 At the Kalk Bay Workshop, legal experts recommended
 225 developing a “code of conduct” on how to implement
 226 LKR. They pointed out that soft law to which stakeholders
 227 can voluntarily adhere to is more realistic, because
 228 countries are increasingly wary of entering into any legally
 229 binding frameworks. Accordingly, two stakeholder consul-
 230 tations took place in Kenya and in India to develop such
 231 guidelines. These guidelines are entitled “Supporting live-
 232 lihoods and local livestock breeds. Guidelines for putting
 233 Livestock Keepers’ Rights into practice” (LIFE Network,
 234 2010) and are now open for signature at: [www.pastoral-
 235 peoples.org](http://www.pastoral-peoples.org)
 236
 237
 238
 239

240 LKR in the CBD process

242 Although indigenous livestock keepers fulfil the criteria of
 243 “indigenous and local communities embodying traditional
 244 lifestyles relevant for the conservation and sustainable use
 245 of biological diversity”, they have only just begun to make
 246 use of the CBD process for lobbying for their rights. At
 247 COP9 that took place in Bonn in 2008, the LIFE
 248 Network, the World Initiative for Sustainable Pastoralism
 249 and other representatives of livestock keepers made a state-
 250 ment demanding that the contribution of pastoralists to the
 251 conservation and sustainable use of biodiversity is
 252

recognized and rewarded in accordance with the commit-
 ments made by contracting parties in articles 8j and 10
 of the CBD, but without reference to LKR.

More recently, the process of developing BCPs has
 strengthened the movement to make an intervention at
 the Meeting of the Ad hoc Working Group on paragraph
 8j of the CBD in Montreal in November 2009 in which
 the working group was requested to consider and reflect
 on the special situation and needs of pastoralists when
 making recommendations on the international regime in
 order to ensure their continued contribution to the conser-
 vation of biological diversity.

Conclusions

Although LKR were originally modelled on farmers’
 rights as articulated in the ITPGRFA, they have evolved
 into a much more comprehensive concept than farmers’
 rights by not being restricted in scope to the right to
 breed, save and exchange genetic material but by encom-
 passing a broader approach that would strengthen
 small-scale livestock keepers and support them to make
 a living in their traditional agro-ecosystems
 (Köhler-Rollefson *et al.*, 2009).

Most of the principles and rights are reflected in existing
 international agreements, including the Interlaken
 Declaration, the GPA, the UN CBD and the UNESCO
 Convention on the Protection and Promotion of the
 Diversity of Cultural Experiences. The one exception is
 the right to breed and make breeding decisions.

While the crucial role of small-scale livestock keepers and
 their locally evolved breeds in biodiversity and ecosystem
 conservation has now become widely recognized at least
 on paper, international policies, especially free trade agree-
 ments, continue to support the proliferation of the
 large-scale intensive livestock production system relying
 on a very small number of high-performance breeds and
 strains. At the same time, general development trends,
 including population trends and land-grabbing, undermine
 the existence of the extensive livestock production systems
 that make use of local resources and conserve biodiversity.
 If small-scale ecological livestock keepers are to survive,
 they need more than recognition on paper: They require
 strong support, and their basic rights – which are already
 implicit in existing legal agreements, such as the CBD –
 must be secured and enforced. While BCPs and the code
 of conduct are useful tools, they are unlikely to be strong
 enough, unless backed by law.

It would be extremely important to adopt the elements of
 LKR as guiding principles for livestock development in
 general. If the same donors that promoted cross-breeding
 and replacement of indigenous with exotic breeds – often
 by investing enormous sums of money – were to support
 livestock keepers in developing local breeds, in organizing

253 themselves, and in niche and added value product market-
 254 ing, they would make a major contribution to saving bio-
 255 diversity and to creating rural income opportunities.
 256

257

258

259

260

261

262

263

264

265

266

267

268

269

270

271

272

273

274

275

276

277

278

279

280

281

282

283

284

285

286

287

288

289

290

291

292

293

294

295

296

297

298

299

300

301

302

303

304

305

306

307

308

309

310

311

312

313

314

315

Acknowledgements

The authors would like to thank the many organizations and individuals that have supported the LKR movement over the years, including (in alphabetical order) Bread for the World, Evangelischer Entwicklungsdienst (EED), Gesellschaft für Technische Zusammenarbeit (GTZ), Hivos-Oxfam Novib Biodiversity Fund, Misereor, Swedish International Biodiversity Programme at the Swedish Biodiversity Centre (SwedBio-CBM), Swiss Agency for Development Cooperation (SDC), The Christensen Fund, Bettina Bock, Günther Bock, Bruno Haas and the Stürz Family. They would also like to express their gratitude to the hundreds of livestock keepers and others who developed the concept and contributed time, ideas, resources and especially enthusiasm.

References

CGRFA. 2009. *The use and exchange of animal genetic resources for food and agriculture.* Background Study Paper No. 43. Rome, FAO.

FAO. 2007. *Global plan of action for animal genetic resources and the Interlaken Declaration.* Rome, Food and Agriculture Organization of the United Nations.

FAO. 2009. *Livestock keepers. Guardians of biodiversity.* FAO Animal Production and Health Paper 167. Rome.

Köhler-Rollefson, I., Rathore, H.S. & Mathias, E. 2009. Local breeds, livelihoods and livestock keepers' rights in South Asia. *Trop. Anim. Health Prod.* 41(7): 1061–1070.

LIFE Network. 2009. *Declaration on Livestock Keepers Rights* (available at www.pastoralpeoples.org/docs/Declaration_on_LKRs_with_initial%20signatories_6.pdf).

LIFE Network. 2010. *Supporting livelihoods and local livestock breeds: Q9 guidelines for putting Livestock Keepers' Rights into practice* (available at www.pastoralpeoples.org/docs/LIFE%20Guidelines%20LKR%20March%202009_2.pdf).

Lokhit Pashu-Palak Sansthan & Köhler-Rollefson I. 2005. *Indigenous breeds, local communities. Documenting animal breeds and breeding from a community perspective.* Q10

Raika Samaj Panchayat. 2009. *Raika Biocultural Protocol.* Sadri, Rajasthan, Lokhit Pashu Palak Sansthan (available at www.pastoralpeoples.org/docs/Raika_Biocultural_Protocol.pdf)

Tvedt, M., Hiemstra, S.J., Drucker, A.G., Louwaars, N. & Oldenbroek, J.K. 2007. Regulatory options for exchange, use and conservation of animal genetic resources: a closer look at property right issues. *Anim. Genet. Resour. Inf.* 41: 91–99.

UNEP & Natural Justice. 2009. *Bio-cultural community protocols. A community approach to ensuring the integrity of environmental law and policy.*