

Encouragement of effective research and development partnerships through a process of competitive funding in Nepal

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Abstract

The provision of research and development funds on a competitive basis can be used to lever change and paradigm shifts in organisational behaviour. The establishment of such a fund in Nepal followed four years of a project-based demonstration. Criteria for the awarding of grants have been tailored to encourage multiple-stakeholder applications to address the demand-driven requirements of the rural poor, who are the main clients for the fund. Key criteria include multi-disciplinary and participatory methodologies, client demand, poverty and gender focus, sustainability, upscaling and environmental issues. Examples of successful partnerships in completed and currently funded projects are given. These cover crops and livestock based activities and include partnerships between public sector research and NGOs, public sector research with communities and NGOs, and public sector research and extension with farmers' groups.

Key words: Competitive agricultural technology fund, institutional change paradigm shift

Introduction

The concept of competitive schemes for funding research and development, often referred to as competitive agricultural technology funds (CATF), is not new. The World Bank has been supporting them in the form of competitive research programmes since 1989 (World Bank, 1999) and several Latin American countries have been operating them for more than 30 years (Gill and Carney, 1999). A study by Gill and Carney (Unpubl) was the first significant attempt to compare different CATFs across a range of countries and continents; benefits had been assumed by donors, development banks and governments keen to establish such funds, but the evidence for success was fragmentary with little or no evaluation of fund impact. The ten case studies reviewed by Gill and Carney, provided useful lessons for existing and potential funds, which included an observation that such funds had perhaps been less successful than at first thought. Where success was greatest, funds had been established at the behest of national governments and were funded directly by them. The review also highlighted the opportunities that CATFs can offer in terms of what Gill and Carney refer to as collateral elements, such as leveraging additional funds, promoting collaboration, improving management structures and encouraging organisational and institutional change.

The continuing enthusiasm for such an approach by donors and governments, is rooted in two key issues. Firstly the need to make more efficient and effective use of increasingly limited financial resources and secondly that the perceived ineffective public sector agricultural research and extension organisations and systems could only be improved if ways of supporting them were changed from the traditional support models.

These perceived inadequacies in research and development performance have driven the trend for competitive funding, with the basic aim of such funds to make research and development more responsive to farmer needs [Rees *et al*, 2001], and in many cases specifically target national poverty reduction strategies.

Nepal is a poor country, ranked 143 in terms of the UN's Human Development Index in 2003 and 151 based on *per capita* income in 2001 [UNDP, 2003]. It is heavily dependent on donor and development bank funding. With over 80% of the population directly involved in agriculture [NPC 2002], and agricultural development a key component of government plans to reduce poverty [HMG/NPC, 2003], the tendency has been for support to focus in this sector. Traditionally, agriculture research in Nepal has been supported through technology generation and capacity building projects, although more recently the trend is towards a sector-wide, more programmatic approach [DFID, 2004]. There has been a long history of donor funding in the public sector, most recently the World Bank funded *Agricultural Research and Extension Project* [AREP] and the Department for International Development [DFID] *Hill Agriculture Research Project* [HARP]. AREP finished in 2002 and the HARP is scheduled for completion at the end of 2004. AREP supported capacity building, multiple stakeholder involvement in research and development and a series of bottom-up planning initiatives which helped develop mechanisms for better articulation of agricultural research demand. HARP has been supporting research and guiding the establishment of a national competitive fund which can, *inter alia*, utilise these processes in the context of a restructured public sector agricultural research

environment, encourage the development of partnerships with other providers of research and encourage initiatives which utilise CBO and NGO involvement in the process of information and knowledge sharing and exchange.

This paper reviews the establishment of the National Agricultural Research and Development Fund [NARDF] as a Government operated CATF, via a project-based demonstration fund, and shows how both have encouraged improved collaboration and responsiveness to demand by generating effective working partnerships between a range of stakeholders.

Project-based competitive funding

The Hill Agriculture Research Project (HARP) was a follow-up to two long-term projects at the Pakhribas and Lumle Agricultural Centres in the mid-hills of Nepal. Initially block grant funding to the two centres was continued at a reduced level but when the decision to further reduce, and ultimately end, this funding was made, it was agreed to establish a competitive grant fund, called the Hill Research Programme (HRP).

The HRP started in 1997 and was designed to support the development of high quality research outputs, which addressed the agricultural problems of hill farming families in Nepal. It also aimed to demonstrate the benefits of competitive time-bound research, implemented through projects developed by collaborative partnerships between research providers. The development of HRP's systems and approach has been described elsewhere (Abington 2000, HARP 2001a) and details of the programme and its outputs as well as the various processes and procedures are given in the published manuals (HARP 1999a, 2000, 2001b, 2001c and 2004) and reports (HARP 1999b, 2001d) some of which are available on the internet at <http://www.nardf.org.np/harp/index.htm>.

Between 1997 and 2004, HRP disbursed some US\$6.8 million through 131 agricultural research projects, implemented by twenty-seven different research providers including the Nepal Agricultural Research Council (NARC), non-government organisations (NGOs), the University and the private sector.

The piloting of the principles of competitive grant funding for agricultural research in Nepal through the HRP was a radical undertaking when it started but has been judged successful (HARP, External - Output to Purpose Review, Unpublished Final Report, April 2003) having generated productive collaboration with different organisations in the public and private sectors, universities, INGOs and NGOs. Application to the HRP fund was originally restricted to NARC, but from 2000 onwards it was open to all research providers whether public, private, individual or NGO. The submission of joint proposals was actively encouraged. A good example in the field of horticulture was the three-year project on citrus decline in Nepal, successfully completed by three collaborating organizations, the National Citrus Research Programme

(NCRP) under the NARC, the Institute of Agriculture and Animal Science (IAAS) and Green Research and Technology (GREAT), a private company. Other examples are enumerated below, and elsewhere (HARP 2001d).

The research capacity of both the public and private sector was enhanced through training on proposal writing, management and implementation of projects. There is a consensus in both the public and private sectors that the projects supported through HRP demonstrated the benefits of a competitive system and time-bound research [Gautham, personal communication]. HRP showed that such a fund encouraged demand-driven technology generation by supporting partnerships and collaboration, it also produced impact at farm level, through uptake and scaling-up of technologies produced by projects (see for example East Consult 2003, LI-BIRD 2003, New ERA 2004).

The HRP confirmed that a competitive research fund could operate successfully and stimulate collaborative and productive research in Nepal, and played a pivotal role in raising awareness and encouraging the establishment of the NARDF by HMGN [Shrestha, personal communication].

NARDF's structure is determined by that Order, and is shown in Figure 1. Overall control is through a seven person *Fund Management Committee* [FMC] chaired by the Secretary of the Ministry of Agriculture and Co-operatives. It is administered and operated by the NARDF Secretariat; the head of the Secretariat is the Member Secretary of the FMC. The Secretariat is supported by a Technical Sub-committee and a panel, of Peer Reviewers.(NARDF 2002a).

Awards are in the form of grants to successful public and private sector organisations or collaborative partnerships, through a process of transparent competition, to a fixed schedule, with applications conforming to agreed formats, criteria and priorities [NARDF 2002b].

The Fund targets government, non-government, private sector and civil society organisations involved in agricultural research and development. It aims to encourage these organisations to compete for partial or complete funding of projectised activities which are designed to promote the overall development of the agricultural sector. This is a key difference from the project-based HRP which was purely a research fund and which allowed individuals to apply.

The focus of NARDF's support to agricultural research and development is for output oriented work which delivers measurable results within a three year period and which supports national objectives and priorities defined in government policy documents. These objectives and priorities are clearly articulated in NARDF's own priority and thematic areas.

The current (2004/05) funding is from Government [US\$86,000], Asian Development Bank (US\$194,000) and DFID (US\$83,000), with increases anticipated for 2005/06 and subsequent years. The aim is to encourage additional funds from Government, the private sector and donors, based on successful performance and demonstrable impact. This approach is a common feature of CATFs, identified by Gill

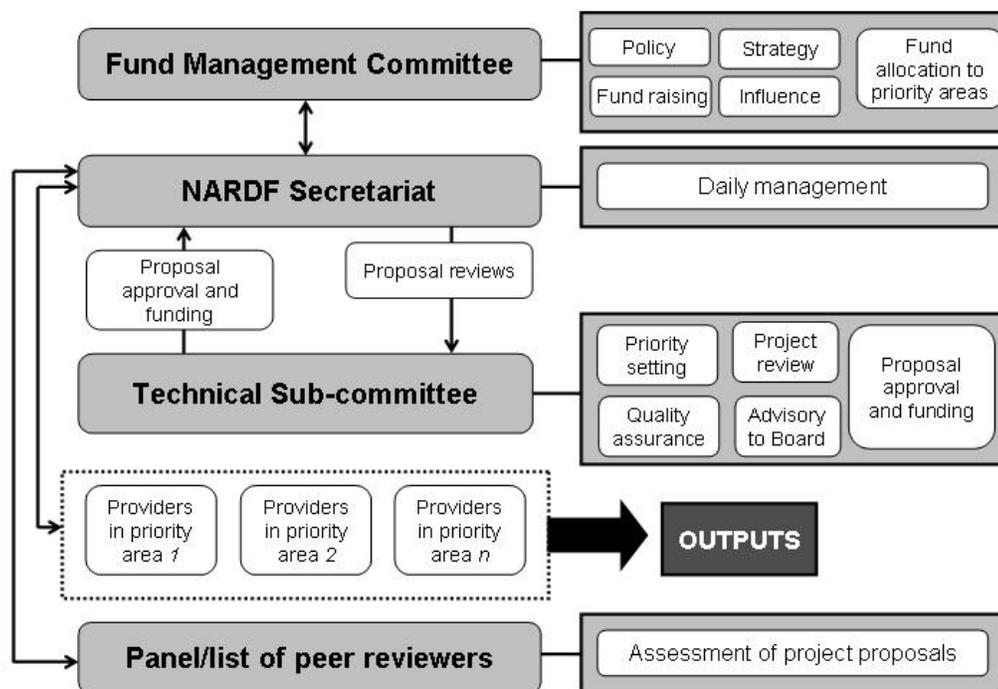


Figure 1 NARDF structure and responsibilities

and Carney [*ibid*] amongst the 10 case studies they reviewed.

NARDF aims to promote a more demand-driven and pluralistic approach to increasing agricultural production, by encouraging the development of institutional and organisational partnerships and the empowerment of end-users. This is leveraged by the criteria on which project concept notes and proposals are judged.

A set of seven criteria were developed [see below] and discussed in stakeholder workshops prior to the publication of the Operating Manual [NARDF 2002b]. The emphasis is on developing partnerships in order to address demand from rural households, especially rural poor and socially excluded groups. The concept is a key part of the Government's plans for poverty reduction and implementation of the 10th Development Plan [HMG/NPC, 2002]. The approach has not been straightforward however as research scientists and reviewers are still largely entrenched in the old supply-driven technology generation paradigm, that sees technologies being delivered to a grateful extension service who then instruct willing farmers on what they should be doing.

In order to encourage the paradigm shift required, both NARDF and NARC are addressing the issue. NARDF is doing this through workshops and seminars on the criteria and principles of the fund for applicants, potential applicants and reviewers as well as critical and punitive assessment of reviewer performance. NARC's approach is through senior management in leading a reorganisation and change process for public sector research, which includes, *inter alia*, increased networking and collaborative implementation with stakeholders, demand-driven research priorities, increased incorporation of social

sciences, policy and marketing research into planning and development activities and the implementation of a tightly focussed, holistic and coherent strategic plan [NARC Workshop Reports on Strategic Planning and Change Management, unpublished].

Discussion

One of the factors that can mitigate against the success of CATFs is a small research base on which to call [Gill and Carney 1999, World Bank 1999]. If the number of research providers eligible to apply for funds is small then this presents problems not only in the capacity of the research community to produce adequate, quality proposals but also for transparent and appropriate review of such proposals, since reviewers are also often applicants, it is difficult to guarantee anonymity and personal interests can dominate selection; this is certainly the case in Nepal.

Initially the HRP focus was on funding proposals from NARC, the public sector research body, but was later broadened, principally due to saturation of research capacity, to encompass the private sector and NGOs. HRP was established as a research fund, charged with technology generation in the classic supply-driven research paradigm, this was later shifted to encompass uptake pathway and more knowledge-based and demand-driven initiatives. Successful technology generating projects were encouraged to develop uptake add-ons to their work with stakeholders. A key difficulty is that implementing add-on proposals to upscale project outputs is a sub-optimal approach to creating greater impact. Better to build all these elements into the design of proposals which not only address demand-driven needs, but also provide

the link from knowledge generation to the utilisation of that knowledge by a wider cohort of potential beneficiaries. Latterly HRP did successfully encourage and develop partnerships between public and private sector actors, as well as between the public and NGO sectors, and demonstrated the productive synergy that can result from such partnerships (HARP, 2003).

An example of such a partnership funded under the HRP CATF, concerned the promotion of rice-fish farming, with successful upscaling of the technology being achieved through collaboration between NARC scientists, government extension services, a Nepal-based NGO Local Initiatives for Biodiversity, Research and Development [LI-BIRD] and community groups [Gurung *et al*, 2003]. In this case rice yields increased by 15-32% and the yield of fish from the intervention increased household incomes by up to 70%. The combined effect of this was a more than doubling in the income of farmers practising the technology they helped to develop. Additional advantages included a reduction in pesticide usage with cost savings and environmental benefits, improved nutritional status and the release of women from the drudgery of weeding since the herbivorous fish reduced weeds naturally.

Another successful example involves an NGO-led initiative which resulted in the scaling up of a programme of participatory variety selection [Devkota *et al*, 2003]. This included the NGO [LI-BIRD], CIMMYT and the DFID centrally funded Plant Sciences Research Programme.

Without the active encouragement of the fund it is unlikely that these levels of co-operation would have been achieved. The concept that joint activities are not only more effective, but also more likely to receive funding, is gradually becoming institutionalised as increasing numbers of collaborative ventures are implemented, leveraging both organisational and institutional change.

The many lessons learnt from this have been incorporated into NARDF's approach, and into the criteria and guidelines given to applicants [NARDF, 2002b]. NARDF's remit is much wider than just research, and the fund does not support station or laboratory-based activities. Preference is given to initiatives which respond to specific demands from farmers and which can be addressed, where possible, using established and accepted technologies and knowledge. Collaborative ventures are actively encouraged and lead organisations may be public or private sector, community-based or NGO.

The selection process is basically a two stage one, with anonymity of reviewers and applicants being achieved through a coding system. The complete cycle is shown in Figure 2, and takes approximately 43 weeks to complete. The first stage involves submission of a project concept note (PCN), which is reviewed by three peer reviewers. If it passes this stage then full proposals are requested. These are also peer reviewed, usually by the same reviewers who approved the PCN. There are seven basic criteria used for both PCN and full proposals, the first three are considered the most important.

1. Is the proposed methodology multi-disciplinary and participatory, involving end-users as well as scientists and extension/development workers, and is there collaboration

between institutions and organisations? It is important that a systems approach is used in development work with farmers. Farmers themselves may, in many cases, be the principal researchers or implementers. Solutions that are developed must fit in to the farming system and not create fresh problems. Social sciences should be involved in the development and implementation of proposals and a strong multi-disciplinary approach should be evident. Some questions which should be asked when reviewing proposals are:

Is the proposal aimed at delivering short-term impact to, and for, end-users?

What role do farmers, or other end-users of anticipated information or technologies, have?

Will good partnerships be developed as part of the project process and will these be sustainable on project completion? Does the proposal add efficiency to, or complement, current activities?

Are the technologies involved already accepted by end-users? This will speed up the impact of delivery.

2. Is there a clear indication that the proposal has been developed as a result of client demand? *Demand* is the demand of farmers and other end-users for an intervention to address a problem that they have. NARDF supported activities should be clearly identified as resulting from such demand. Strategic or basic research, where researchers or others have identified a problem or potential problem, is not the objective of NARDF funding. Even if a PCN is addressing what may be considered a national priority, the applicant should demonstrate that there is a clearly identified demand from farmers or other end-users. Reviewers are asked to remember that although a proposal may be well written, and good basic or strategic research, it may **not** be appropriate for NARDF support. NARDF is not designed or intended as a fund to support **all** aspects of agricultural research and development.

3. Is it shown how outputs from the work will be made available to a larger client audience [upscaling], and has consideration been given to the cost of this? Spreading successful *Outputs* is notoriously difficult. The approach given in the proposal should involve close work with NGOs or CBOs. Farmer groups may be developed as part of the research/development process, for example. Some of the issues that reviewers consider will be:

Whether knowledge systems have been clearly identified, or should this be incorporated into the design?

The cost of wider dissemination of project *Outputs*, or the cost of the proposed interventions on a *per capita* basis, should be realistic and reasonable. Proposals where the cost of upscaling are high, should be discouraged as unsustainable in the absence of the project.

Projects which utilise technologies that are already being used and are spreading should be encouraged.

Similarly the development of markets and marketing processes is an important part of upscaling and the development of uptake pathways.

If these are present in a proposal it should receive a high score for this criterion.

4. Will the Outputs address government's targets for poverty reduction? Poverty reduction and elimination are key issues that must be addressed. The contribution of agricultural research and development interventions to the improvement of rural livelihoods can be significant, however other factors may mitigate against this. It is no good increasing yields, for example, if no markets exist to realise increased sales.

5. Have the different gender roles of farmers been considered in the design? Men and women have different roles in the farming and household environments. It is important that these are taken into account.

6. Have environmental issues, both positive and negative, been addressed in the design of the proposal? The effect of the proposed *Outputs* on soil, water, vegetation, wildlife and non-users, should be fully considered and if appropriate management of these should be incorporated into the design. The farming systems, ecological or geographical zones being targeted can be important in this context, for example, steep hill side areas are fragile eco-systems and short-term benefits in farming systems based on livestock can result in long-term environmental damage.

7. Can the work proposed be completed in the time available [maximum of 3 years] given the resources available and nature of the proposal? The scheduling of proposals is often over-optimistic. The simple technologies and information that can significantly impact at farm level, can often be developed fairly rapidly. The greater farmer involvement in the development, the more likely this is to happen. If the timescale is not appropriate then the PCN or proposal may be rejected on this basis.

After review the NARDF process asks applicants to indicate whether or not they accept the recommendations made by the reviewers. If they do not, then the PCN or proposal is rejected. It is important that reviewers give full and detailed reasons for the recommendations that they make, so that the NARDF Secretariat and the applicants can fully understand the reasons for such decisions. Currently fifteen initiatives are being implemented under the first round of NARDF funding. Three examples are used here to illustrate the positive effect of this encouragement.

In the first example, a project to develop better crop management packages for oilseed crops, an NGO [FORWARD, Forum for Rural Welfare and Agricultural Reform for Development] is taking the lead with technical backstopping from NARC scientists and inputs from extension officers in the target areas. The team is working with farmer groups to develop and evaluate the strategies and the proposal clearly indicates the roles of each of the partners. The second example is also led by FORWARD, and involves developing community-based seed management strategies, with communities and with the support and assistance of the extension services. A final example from the current round of projects involves NARC, the extension services and two local NGOs based in communities in the project area. This project is identifying and

promoting commercial agricultural opportunities with farmers, in a recently opened road corridor [NARDF, unpublished report].

These, and the other proposals under the first call, have been selected from over 200 applications. The fund's focus has made it possible to not only encourage this type of work by accepting appropriate initiatives, but also by explaining to unsuccessful candidates why their applications were rejected and what needs to be done in order to make them acceptable. The review of proposals for the second round of funding is now underway, and it is already clear that a far greater proportion of collaborative ventures which actively consider issues of uptake and upscaling are being submitted. Of nearly three hundred applications, some 70 have been accepted as project concept notes, and it is hoped that up to 40 will be eventually funded.

There are several key lessons and challenges that have been identified from the establishment of a national CATF in Nepal. Some of these are fairly obvious, some are more subtle.

1. CATFs should remain in the public sector, but be as autonomous as government systems allow.
2. Ownership of the fund concept and approach by senior government officials, is crucial to success and sustainability, although high levels of autonomy are also required to enable faster processes and response times.
3. Transparency in the process of award and management of funds is vital to build confidence, not only for applicants but also for potential sources of funding [government, donor, private sector].
4. Project-based funds have a vital role to play in demonstrating principles, but because they operate in a special environment should not be considered sustainable. They are a useful precursor to national funds.
5. Criteria adopted by funds can be used as tools to encourage positive change in organisations, including such things as participatory, gender-sensitive, poverty-focussed demand-driven interventions.
6. The impact of CATFs on poverty reduction can be greatly enhanced by incorporating upscaling and extension/development activities into the criteria and aims of such funds.
8. The aim should be to have the simplest processes and reporting systems compatible with transparent and effective implementation and management.
9. Simple interventions which build on established technologies offer faster impact.

A final point which it is important to remember, is that a CATF can only ever be one component of research and development funding, and should complement other sources which better provide for capital development and long-term activities [Echeverria 1998, Gill and Carney 1999, Janssen and Braunschweig 2003]. It is a useful tool because of its immediate benefits in funding appropriate interventions, and also because it can serve as a significant driver of change, what Gill and Carney [*ibid*] refer to as a *collateral element*.

It is of course too soon to say how effective these partnerships will be, but because of the monitoring and

evaluation system based on logical frameworks, and the clear definition of partners' roles in project documentation, it should be possible to ensure that commitment to partnerships is both real and productive.

Conclusions

Without doubt, both NARDF and HRP, have encouraged productive partnerships in knowledge generation and the making of that knowledge available in a useable form to those demanding it. None of this would have been possible without the HRP project-based CATF, which although unsustainable served two useful functions. Firstly a purely technical role in technology generation, training and impact, and secondly and more importantly for long-term national benefit, the role of demonstrating the feasibility and advantages of collaborative partnerships in generating useful and useable output. NARDF as a national fund is still in its infancy but early indications are that it is successfully building on the lessons learned from HRP and is actively promoting the necessary paradigm shift so that the knowledge required to reduce poverty is generated and accessible to those who need and demand it. The next few years will be crucial to determine whether or not the changes will be sustainable and permanent, but the principle of productive collaboration has already been amply demonstrated.

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References

- Abington, J B, 2002., The Hill Research Programme of the Hill Agriculture Research Project – A working model of a competitive grant fund. In: Competitive Grants in the New Millennium: A Global Workshop for Designers and Practitioners. Brasilia, 16-18 May 2002. pp 126-142
- Devkota, K P, Baral, K P, Gyawali, S, Tripathi, M P, Subedi, A, Gautam, R, Joshi, K D, Sthapit, B R and Witcombe, J R, 2003., Scaling up of participatory variety selection: LI-BIRD experiences. In: Uptake Pathways and Scaling-up of Agricultural technologies to Enhance the Livelihoods of Nepalese Farmers: Proceedings of a Workshop 23-24 September 2003, Kathmandu, Nepal. Hill Agriculture Research Project, Kathmandu, Nepal. pp 103-111
- DFID, 2004., Nepal Country Assistance Plan. Department for International Development, London, UK. 53pp <http://dfid.gov.uk>
- East Consult, 2003., Outcome Evaluation – Research on the development and application of a low-cost water storage tank for dry season irrigation of high value horticultural crops. East-West Consult Ltd, Kathmandu, Nepal. 18pp
- Echeverria, R G, 1998., Will competitive funding improve the performance of agricultural research? ISNAR Discussion Paper 98-16, The Hague, The Netherlands. 20pp
- Gill, G. J, and Carney, D, 1999., Competitive Agricultural technology Funds in Developing Countries. Overseas Development Institute, London. 76pp
- Gurung, T B, Gautam, R, Bista, J D, Wagle, SK and Singh, D M, 2003., Lessons learned from the experience of uptake pathways of rice-fish farming system. In: Uptake Pathways and Scaling-up of Agricultural technologies to Enhance the Livelihoods of Nepalese Farmers: Proceedings of a Workshop 23-24 September 2003, Kathmandu, Nepal. Hill Agriculture Research Project, Kathmandu, Nepal. pp 65-71
- HARP, 1999a., The Hill Agriculture Research Project How To Guide. Hill Agriculture Research Project, Kathmandu Nepal. iv + 34pp <http://www.nardf.org.np/harp/index.htm>
- HARP 1999b., Projects Funded by the Hill Research Programme. Hill Agriculture Research Project, Kathmandu Nepal. i + 69pp <http://www.nardf.org.np/harp/index.htm>
- HARP, 2000., The How to Guide on Preparing a Full Project Proposal. Hill Agriculture Research Project, Kathmandu Nepal. iv + 49pp
- HARP, 2001a., Operating a Competitive Grant Fund - the HRP Experience in Nepal. Hill Agriculture Research Project, Kathmandu Nepal. ii + 72pp <http://www.nardf.org.np/harp/index.htm>
- HARP, 2001b., The How to Guide on Developing an HRP Project Concept Note. Hill Agriculture Research Project, Kathmandu Nepal. iv + 44pp <http://www.nardf.org.np/harp/index.htm>
- HARP, 2001c., The How to Guide on Managing and Implementing an HRP Project. Hill Agriculture Research Project, Kathmandu Nepal. iii + 55pp <http://www.nardf.org.np/harp/index.htm>
- HARP, 2001d., Profiles of Hill Research Programme Funded Projects in Nepal. Hill Agriculture Research Project, Kathmandu Nepal. ii + 132pp <http://www.nardf.org.np/harp/index.htm>
- HARP, 2003., Uptake Pathways and Scaling-up of Agricultural technologies to Enhance the Livelihoods of Nepalese Farmers: Proceedings of a Workshop 23-24 September 2003, Kathmandu, Nepal. Hill Agriculture Research Project, Kathmandu, Nepal. 206pp
- HARP, 2004., Monitoring and Evaluation of Agricultural and Natural Resource Research Projects. Hill Agriculture Research Project, Kathmandu Nepal. 138pp
- HMG, 2001., Decision of the Council of Ministers dated 25/08/2058 (10/12/2001) under the *Karya Sanchanlan Yan* (Working Fund Act) 2043.
- HMG/NPC, 2002., 10th National Development Plan, National Planning Commission, His Majesty's Government of Nepal. 624pp http://npc.gov.np/tenthplan/docs_in_english.htm
- Janssen, W and Braunschweig, T, 2003., Trends in organisation and financing of agricultural research in developed countries, implications for developing countries.

- ISNAR Research Report 22. The Hague, International Service for National Agricultural Research. 100pp [<http://www.isnar.cgiar.org/publications/pdf/rr%2D22.pdf>]
- LI-BIRD, 2003., Outcome Evaluation – Poverty alleviation of poor farmers by increasing productivity and improving the quality of hill tea. Local Initiative for Biodiversity, Research and development, Pokhara, Nepal. 15pp
- NARDF, 2002a., Working Procedures. National Agricultural Research and Development Fund, Kathmandu, Nepal. August 2002. 16pp [<http://www.NARDF.org.np>]
- NARDF, 2002b., Operating Manual. National Agricultural Research and Development Fund, Kathmandu, Nepal. August 2002. 83pp [<http://www.NARDF.org.np>]
- New ERA, 2004., Outcome evaluation of improved productivity in the upland cropping system of the mid-western tars and hills using legumes. New ERA, Kathmandu, Nepal. 18pp
- NPC, 2002., Concept Paper of the PRSP/10th Plan. National Planning Commission, Singhadurbar, Kathmandu, Nepal. 28pp
- Rees, D J, Oryokot, J, Okurut-Akhol, H, Mulhali, A, Nangoti, N and Okwadi, J, 2001., Institutionalising client-oriented participatory agricultural research through regional competitive agricultural technology funds. In: Proceedings of the Regional Conference of the Southern and Eastern African Association for Farming Systems research-Extension, Nairobi, Kenya, 20-24 August 2001.
- UNDP, 2003., Human Development Report 2003, *Millennium Development Goals: A compact among nations to end human poverty*. United Nations Development Programme, New York, Oxford University Press. 368pp <http://hdr.undp.org/reports/global/2003/>
- World Bank, 1999., Competitive Grant research Programmes – Good Practice for Design and Management. World Bank, Rural Development Family, Agricultural Knowledge and Information Systems, Good Practice Note No. 03/99. 15pp <http://lnweb18.worldbank.org/ESSD>