# Dimensions of Various Public Participation Schemes in Natural Resource Management: A Review of the Discourse on Participation and who's Impact?

UKAEJIOFO Rex Uzonna Visiting Research fellow Cukurova University, Adana, Turkey & PhD Candidate Department of Rural Development & Management College of Humanities & Development Studies China Agricultural University, Beijing.

> **Prof. Dilek Bostan BUDAK** Department of Agricultural Economics Cukurova University Adana, Turkey

### Abstract

Community based natural resources management programs are based on the assumptions that peasants have a greater interest and by so can coordinate their own affairs effectively either by local or traditional forms of process and or practices. The assumptions that stakeholder participation could lead to better management and practices has also been established mainly through case studies and a few studies aiming at establishing it empirically. So many program aimed at strengthening capacity for peasants to manage sustainably their own resources has been ongoing in several plains, in various contexts and executed. But peasants would argue not in their own terms. This paper highlights various schemes in managing natural resource and the attendant local-level stakeholder participation in natural resource management accessing the challenges, conflicts and defining a more logical path for peasants to be better involved in the ensuing dialogue on how best to manage their own resources to deliver more on gains of pro- poor programs. We suggest some of these ideas by the degree of local participation, ranging from no local stakeholder participation to programs undertaken solely by professional actors to an entirely local stakeholder effort undertaken by peasants. The paper seeks to identify and establish the most relevant of schemes undertaken in the past to develop methods that are best suited for greater impact in driving sustainable natural resource management practices from reviewing all the dimensions taken by synthesizing cases on natural resource management schemes.

Keywords: Natural Resource Management, Stakeholder Participation, peasants

## 1.0 Introduction

CNRM<sup>1</sup> can be viewed as a modern attempt to revive often quite established and traditional local and indigenous cultural and institutional mechanisms for managing and conserving the natural agro ecology (Croll and Parkin 1992; Berkes *et al.* 1998). The reality for much of the world, however, is that many traditional practices for regulating nature have eroded as a consequence of expanding markets, industrialization, urbanization, state power, economic globalization, and profound alterations in property rights, life-styles, and consumption patterns (Goodland *et al.* 1990; Miller *et al.* 1991; Worster 1993). This system of management is based on the premise that local people are able to manage their own situation well and be better for it. In the analysis of the foregoing it's important to understand the people in these contexts and sometimes the great bond they have to their own resource and the way they want to go about it for a greater collective goals.

<sup>&</sup>lt;sup>1</sup> CNRM: Community Natural Resource Management

With the advent of national and State government intrusion into these areas, for either protective, developmental and or conservation purposes, this usually comes with a great task of bringing in "experts" to advice both sidesgovernment and people on best ways and or practices to ensure sustainability. These methods have been criticized for being too expensive and unable to continue in the long run (Thompson et al, 1998; Spellerberg, 2005). In these there have been a number of growing concerns on the "stand" of these experts are on and of what good the process is to realise for the people, reason why many well-intended interventions have failed because inadequate attention has been given to the various stakeholders and their respective economic interests and objectives. Policies and projects have not met their stated objectives because the consequences of the policy are perceived to be adverse by one or more stakeholder groups, and have therefore led to non-cooperation or even open opposition by these stakeholders, multiple and competing goals

Community based natural resource management is reasoned in different views by different players in the field. Conservationists, both indigenous and foreign, see it as an avenue to involve the local people in its conservation and resource management goals as a means of sustaining the ecological diversity (McNeely, 1995). Development organizations, driven in part by stiff criticism of being largely socially and economically oppressive resource development programs that they have supported, aim to include local participation in "conservation and development" (World Bank 1996). Civil right activists hope to lend voice to local groups in their aggression and fights with state resource management agencies and national and transnational funding (Colchester & Lohmann, 1993). Indigenous peoples' spokespersons argue for outright respect for local rights, knowledge while stressing culture (Croll & Parkin, 1992).

During the early 1970s when many became disappointed with the results of large-scale, capital-intensive, and centrally planned development projects, CNRM began to gain attention (Horowitz and Painter 1986). Interest particularly developed in agriculture, water management, and forestry, focusing on promoting the participation and enhancement of the power and decision-making role of local communities (Little, 1994). International organisations as the World Bank, and various international donor communities, have invested in the efforts of both local and transnational NGOs to promote community-based natural resource management regimes. (Grimble & Quan, 1993). Clearly, at the heart of natural resource management lays the struggle for power and domination between various stakeholder groups, countries, and between genders (Beilin, 1997; Coakes, 1998; Guijt & Shah, 1998). Major natural resource management choices tend to be political by nature (Dargavel, 1980). Issues related to definitions of rights over resources are still debated. Buchy and Race, 2001 in their work "the twists and turns of community participation" made a distinct narrative on term participation on various NRM projects that echoed community participation. They brought to the fore some pertinent questions as how true and genuine is the requirement of genuine participation, they attempted to identify what is missing in some of the current approaches used in some NRM projects in Australia. The works of Nelson & Agrawal, (2008) on participation on NRM in Africa also looked at decentralizing this power to local communities and the need to erect suitable institutional governance for checks and balances, lent thought on the various issues of stakeholder participation and social relations of power as regards management of natural resource programs. Stating rather less rhetoric on the need for practitioners in the field to begin to see and view participation either and a means to an end or an end to itself. They should, from the outset, make the distinction that has been described by Nelson & Wright (1995) as the distinction between 'instrumental' and 'transformative' participation, in other words, using participation as a tool for a specific end or embracing participation as a mechanism for social change.

This paper tries to encourage dialogue on the challenges, conflicts and an effective path to strong stakeholder participation in natural resource management that could lead to better management and practices. In particular we wish to stress the need for dialogue between those who are positioned as advocates and planners of communitybased natural resource management, on one hand and those who are positioned as owners of these resources and how they can take part in the decision schemes, planning and in eventual co-ordination of their own resources.

### 2.0 Product & Process Dimensions

With the contextual complexity for public participation in natural resources planning and the dominance of technically trained experts in natural resource organisations, states and in National governments, it is not surprising that the question of successful public participation programs has been largely ignored in the natural resource planning literature. Several researchers have attempted to map the dimensions of success. Most notably, Wondelleck & Yaffee (1994) suggested that success is multidimensional in character.

They indicated that successful public involvement programs included "collaborative" decision making, built relationships with participants, involved communication across agency and or non-agency boundaries, and resulted in measures of social and political acceptance of proposed actions. Moore's (1994) cross-cultural investigation of two protected-area planning projects yielded similar results, with success having both product and process dimensions. Product dimensions included getting a plan written, securing the political support of the proposed plan, and ensuring that various interests are duly represented in the planning process. Process-oriented measures included establishing responsibility for the area ("ownership" in the plan) and enhancing relationships among the groups involved in the process. Both studies are useful in furthering our understanding of important dimensions of successful participation. Yet significant questions remain. Friedmann (1973) argued that personcentred dialogue leads to an understanding of each other's life situation and lays the foundation for the more challenging subject-matter-related interaction at the heart of public participation. Suggesting that learning in itself involves a number of approaches including an understanding of ecosystem function and process, comprehension of required legal and policy processes, and more personal dimensions bordering on values, beliefs, and interests of all participants. A public participation program designed to meet interest representation objectives would actively ensure that certain groups and stakeholders show up at meetings.

This requires an active, perhaps even aggressive, meeting design strategy rather than the typical passive newspaper announcement approach used by many natural resource agencies. Public participation designed to develop a sense of ownership might have members of the public suggesting management actions, not late in the planning process, but soon after goals, resource conditions, and management philosophies have been identified. Planners may invite the public to assist in writing the plan, and may suggest important roles of the public engaging in required monitoring components. Designing such projects in such a way to adapt considerably well to actual objectives. If one dimension of success is learning, and this becomes an objective, public participation could be designed to enhance such opportunities, through small learning groups, field visits, and other forms of active participatory learning (Krannich *et al*, 1994). If an objective is to enhance relationships, a public participation meeting to provide opportunities for informal, face-to-face dialogue would be important.

#### 2.1 Evidence on claims of Participation

Approaches to stakeholder participation have progressed through a series of recognisable phases: from awareness raising in the late 1960s (the anti-modernisation critique of the transfer of technology paradigm; see van Tatenhove and Leroy (2003) for a review); incorporating local perspectives in data collection and planning in the 1970s (Pretty, 1995a,b); the development of techniques that recognised local knowledge and "put the last first" such as farming systems research and rapid and participatory rural appraisal in the 1980s (Chambers, 1983); increasing use of participation as a norm in the sustainable development agenda of the 1990s (UNCED, 1992); the subsequent critique of participation and disillusionment over its limitations and failings- in Participation as Tyranny (Cooke and Kothari, 2001); and finally to a growing "post-participation" consensus over best practice, learning from the mistakes and successes of this long history (e.g. Hickey and Mohan, 2005). These issues have constantly been in diverse places geographical and in various disciplines. Instead of seeing these views as competing with one another, various typologies have been developed to understand the differences between these interpretations and their associated approaches and methods, and understand the different contexts in which they are most appropriate. Attempts that have been made to focus on evaluating the process rather than the outcomes (Rowe and Frewer, 2000).

This may be partly due to the challenge of selecting appropriate evaluation criteria and data collection methods. Blackstock *et al.*, (2007) argue that the evaluation of participatory processes should itself be participatory, with stakeholders selecting and applying the evaluation criteria. However, this is not straightforward. Webler and Tuler (2006) found strong differences of opinion between participants that they selected from ten case studies, about what constituted a "good" participatory process. Notwithstanding such differences, it may still be possible to develop evaluation criteria with stakeholders. More commonly, participation is evaluated in the absence of stakeholder engagement, on the basis of criteria derived from theory and the analysis of cases (Chase *et al.*, 2004). For example, Chess and Purcell (1999, p. 2685) evaluated the extent to which "process" and "outcome" goals were achieved through a range of participatory methods.

They found that the extent to which these goals were met did not differ between the different methods (public meetings, workshops, or citizen advisory committees). Instead success was influenced by the way that group dynamics were handled by facilitators (e.g. dealing with dominant individuals and placing participants in reactive positions), communication with participants (e.g. lack of information or publicising events and condescending attitudes towards participants), the clarity of goals that were set, and the quality of planning. Brody, 2003 evaluated whether stakeholder participation had improved the quality of local plans for the long-term management of ecological systems on the basis of theoretically-derived criteria, and found that the presence of specific stakeholders significantly increased their quality. Koontz, 2005 conducted a multiple-case analysis to evaluate the extent to which stakeholder participation influenced the recommendations of community-based task-forces developing local farm preservation policy in the United States. He only found a significant effect in counties where the citizens and the elected officials were highly concerned about the issues involved, and where participants were connected with strong social networks that focussed on the issues being discussed.

#### 2.2 What Issues?

2.2.1 Power factors: Power is central to participatory processes. Power is a major reason why people decide to get involved in natural resource management issues, while at the same time government agencies may be reluctant to relinquish their control over resource management (Snowdon & Slee, 1996). The nature and extent of participation in a policy or a development process are often measured in terms of the power and role that different stakeholders have in the decision-making process. Along the scale of participation from cooperation to collective action (Cornwall, 1995), manipulation to citizen control (Arnstein, 1969) or passive participation to self mobilization (Pretty, 1995), the greater the control by 'outsiders' (e.g. those outside the local community), the less local communities tend to be involved at critical stages of decision making. Kaufman (1997, p. 154) urges us to look at power differences not as inequality between groups only, but as having the "capacity... to control and dominate other social structures and natural resources". People's capacity to be involved in a participatory process is often pre-determined by the type of process itself, supporting the maxim 'who initiates the process, controls the processes. Examples of community mobilization and control over participatory processes remain rare. Forester (1989) has analysed how information, as a source of power, could be used by planners to manipulate or control the process at the level of decision making, of setting agendas and of shaping perceptions.

2.2.2 Changing the relationship pattern and learning. One positive aspect of engaging in a participatory approach to resource management is the improved rapport between the community and the responsible government agency. As different people get involved in discussions or negotiation process, different parties start to know and understand each other which are the underlying ingredients for trust. The improved understanding improves communication channels, which are crucial in participatory processes (Chambers, 1997). At a more strategic and individual level, transformative participation can help personal development, by engaging people in a learning process which increases their self-esteem and confidence, allowing them to better use their own resources (Chambers, 1997). Empowerment frequently also implies an aspect of increased critical awareness. In the context of successful empowerment, the meaning of 'power' has shifted from power 'over' people, to power 'to' people, with the latter implying that the power transfer has occurred in an enabling way (Claridge, 1997).

2.2.3 Benefits and costs. Amongst some proponents there is a tacit perception that participation is a positive change which delivers efficiency and effectiveness with few, if any, drawbacks (Warburton, 1997). The appeal of participatory planning or management resides in the assumption that, once community views have been taken into account, the policy or project will better reflect their needs and fit into a social and economic reality, and that people will feel a sense of ownership over the policy or project (Rahman, 1993; Chambers, 1997) and will be more compliant with bearing the costs (Davis, 1996; Warburton, 1997). Yet the costs are not necessarily insignificant and can sometimes be considerable. Davis (1996) listed these costs as follows:

- increasing time taken by, and the administrative costs of, projects and policies;
- allowing opposition to develop;
- raising exaggerated expectations; •
- limiting viewpoints expressed through consultation, e.g. vocal and organized groups can create dominant • viewpoints, causing problems of representation and legitimacy;
- Generating wrong or biased information.

Smarting from experiences in Natural resource management, these concerns are real and as much the product of poor implementation of participation by sometimes ambitious staffers of some development agencies as manifestations of the limitations of participation itself. Data on monitoring and evaluation of participatory processes has often been neglected, and in some cases there are few empirical data to assess the outcomes of different forms of participation for community development or natural resource management.

### 3.0 Path to effective stakeholder participation in NRM:

Lauber & Knut (1998) consider that the appropriateness of a particular participatory style will depend more on the way techniques and or approaches are figured out rather than on a specific choice of technique. Notwithstanding what type is chosen certain principles adjudged to be of good practice are to be observed. Most of these principles relate as much to attitudes or behaviour as to the allocation of or resources (Davis, 1996; Warburton 1997). Lachapelle et al, (2003) identified the following as constraints in achieving a desired results in their study of seven different regions, they include: Inadequate goal definition, lack of trust, Procedural obligations, Inflexibility and the prevailing Institutional design. Much disagreement still exists over what constitutes best practice. For example, Webler et al. (2001), Webler and Tuler (2006) used Q methodology (a form of factor analysis used to study subjective viewpoints among participants) to identify four distinct views of best practice from those who had taken part in ten participatory processes, who differed over how to tackle issues of power and trust, and the role of strong leadership and or direction and scientific information. However, such views are not mutually exclusive, and a review of the literature shows that a broad consensus over key features of best practice is emerging from "post-participation" disillusionment. Buchy et al. (1999) summarized the situation under four principles, which we see to be most appropriate and are outlined below.

- i. Commitment and clarity of purpose: The agency seeking people's involvement has to be very specific at the outset about what it is prepared to achieve to avoid misleading the public and raising false expectations.
  - Is it seeking people's views, informing them or proposing to share control?
  - Is it prepared to commit adequate resources to the participatory process?
  - Is it prepared to implement the recommendations developed by the participatory process?

Clearly, government agencies have their own mission to fulfil and have to operate within their constraints (Warburton, 1997). The agency involved has to be committed to the process and this may mean developing institutional incentives or a different 'corporate culture', as well as providing the staff with adequate resources (Steelman & Asher, 1997).

- Are there specialized staffs to deal with participatory issues?
- Are the staffs who engage in consultation issues accorded the same status as their peers, for example in career opportunities?
- Will the staff be paid appropriately for extended and unusual hours of work?
- Will the staff receive special training?

Moore (1994, p. 122) identified the need to develop a shared understanding between the partners as ably explained by Agrawal and Gibson (1999) which required the agency to develop a conducive environment "where people were able to talk and listen to each other". Participation is essentially about building partnerships and implies that all the partners take their share of responsibility, with Davis (1996, p. 40) recommending that, when an agreement has been reached, "Participants should hold themselves accountable for implementing the resulting recommendations". Burroughs (1999) opined about building up an agenda or a consensus to solve organizational problems as being an important step within the participatory process. There is a need to identify and clarify issues to avoid conflicting agendas, or misunderstanding.

*ii. Time and group dynamics.* One measure of commitment is the amount of time allocated to the participatory process. In the literature, the issue of time is mentioned by most authors either because there is not enough time or the timing is not appropriate. If the participatory process is perceived as an educative process rather than a consultative process, then the principles of education would suggest that a greater rather than a shorter period of time will be required. A theory of group dynamics identifies four stages through which any groups usually pass: the building, storming, normative and performing stages (Pretty et al., 1995). This suggests that groups need sufficient time to develop before they can become functional.

- iii. Representation: The question of 'stakeholders' is often very controversial as it is difficult to limit the number of groups that seek to be involved as a genuine or minor stakeholder (Colfer, 1995). It is also related to the concept of 'community', which has geographical, cultural and ideological meanings (Brand et al., 1993; Agrawal & Gibson, 1999). The safest way may be to identify the most obvious potential stakeholders without ruling out any groups. The process of selection has to be open and transparent, so that people are at least aware of the process being put in place. The next step is to be cautious so as not to choose processes which will exclude some groups by default. The comment "anybody interested had a chance to participate" is all too common and unhelpful. The design of the consultative process itself may exclude some groups. For example, groups that are often excluded from evening meetings will be women and young parents who cannot afford alternative childcare. In addition, writing submissions for development funds requires technical resources and communicative skills that are not readily available within all segments of society, people relying on public transport cannot attend meetings outside specific times and local people are often excluded as the communication process chosen sometimes are new or even perceived as rude. Another important issue to consider is that of the social relations to power between the stakeholders (Kelly & Alper, 1995); in particular, asking the following questions.
  - Some stakeholders have more power: will their voices carry more weight? •
  - Will the agency in charge, as the main and often the more powerful stakeholder, listen to smaller voices?
  - Have the stakeholder groups been clearly defined? (And by whom?) •
  - Do all the members of a stakeholder group have the same voice and opportunity to express their views?
  - How have the views within stakeholder groups been obtained?
  - Have issues of equity been clearly defined and agreed upon?
- iv. Transfer of skills. As natural resource management decisions are often made in industrialized countries within a positivist framework, in which knowledge and expertise reside in the 'expert', the value of transferring skills to the community is often overlooked or undervalued. Although learning happens 'organically' through the involvement of communities in the participatory process itself, many more specialized skills may need to be transferred specifically.

These four principles can be used as a framework, either as a planning tool or check list, or as an evaluation tool to assess the quality of participatory processes.

### 4.0 Conclusions

Stakeholder participation in managing of natural resources, policy formulation and in program implementation which is inclusive is the major drive for enduring outcomes to emerge in all process. Moreover, the importance of demanding for a process that works should not be different from any other plea for any forward thinking developing partner, instead a more consultative process not to be underestimated should be key. Governments all over the world are reputed to be key drivers for establishing participatory process and there are some doubt as to the extent to which local interests can actually influence the eventual outcomes (Pretty, 1995a) Whether participation is viewed as a conceptual approach (i.e. transformative) or a tool for implementation (i.e. instrumental). Is participation just a different methodology or does it imply a change of perspective, ethics and philosophy? Or an identification of the most appropriate system given the situation under the circumstance or of allocating adequate time and financial resources to match the participatory process required to meet the diversity of the issues or changes required;

- Experts and or agents need to be equipped with appropriate skills. •
- Addressing power relations and social contact issues.
- A readiness to make considerable changes needed to happen within institutions: consulting communities is relatively easy compared with meaningful change.

Finally, the long-term success of participatory processes may depend on institutional reforms to conforming stakeholder participation to challenge the prevailing forms of governance towards building conditions of common understanding, agreeable terms of social accountability and responsibility while having mutual trust (Ostrom, 1997, 301; Agrawal and Gibson, 1999, 635-638).

Although participation is increasingly becoming embedded in policy, the requirements of participatory processes are not in agreements or in same lines with many of the structures found in the organisations that are constantly in touch with the communities over managing of natural resources. Most of the challenges encountered in participatory processes have their roots in the various organisational cultures of those who fund, manage or are tasked with the responsibilities of working closely in these terrain. However, few of the claims that are made for stakeholder participation have been tested, and there is continual evidence that with such participation, there is an increase in the quality of agro-ecological decisions, possibly due to more comprehensive information inputs. However, the quality of decisions made through stakeholder participation is strongly dependant on the nature of the process and principles in arriving at them. A not too well thought out program as highlighted above are mostly blamed for its failures arising in disillusionment in stakeholder participation. Tools used in such process are often times made a focus of participation, rather than the process within which those tools are used.

However, by focussing on participation as a process, this review has identified a number of best practice features from the literature. It is argued that stakeholder participation needs to be operated with a philosophy that emphasises empowerment, equity, learning and mutual trust co-existing together. Participation by numerous stakeholders in any such project should be aimed to be the first of such proceedings which helps all actors to understand co-players and forge a more comprehensive road map to actualising benefits. With such process, having clear objectives from the beginning, putting into consideration the need for expert analysis. Indigenous and scientific knowledge can be integrated to provide a more comprehensive understanding of complex and dynamic natural systems and processes. Such knowledge can also be used to evaluate the appropriateness of potential technical and indigenous solutions to natural resource problems. In order to design more effective and appropriate participatory processes, research is needed to better understand and prioritise the factors that make stakeholder participation lead to stronger and more durable decisions in different contexts. There is a need to replicate and compare participatory processes in different agro-ecological contexts, and to compare participatory processes applied using different approaches and methods in similar contexts. Building on the sorts of best practice principles in this review, to enable a systematic evaluation of participatory processes against criteria derived from both theory and from the stakeholders themselves. And as natural resource management continues to adapt to meet broad economic concerns in the wider scene, it is only natural for various stakeholder needs to increase in participation and in demands for access at various developmental stages. The enormous challenge lies in all stakeholder groups to construct a shared vision and practices which would help them to meet multiple goals making all impact to be felt.

#### Acknowledgements

The study was carried out with financial support from the Turkish Scientific and Technological council (TUBITAK) Ankara, Turkey. We thank the anonymous reviewers for their valuable comments which helped to considerably improve the quality of the manuscript.

### References

Agrawal, A. and Gibson, C. (1999). *Enchantment and Disenchatment: The role of Community in Natural resource conservation*. World Development Vol. 27, No. 4, pp. 629±649, 1999. Elsevier Science Ltd. United Kingdom.

Arnstein, A., (1969). A ladder of citizenship participation. Journal of the American Institute of Planners 26, 216-233

- Beilin, R. (1997) *The construction of women in Landcare: does it make a difference*? in: S. Lockie & F. Vanclay (Eds) *Critical Landcare* (Wagga Wagga, Centre for Rural Social Research, Charles Sturt University).
- Berkes, F., M. Kislalioglu, C. Folke, and M. Gadgil. (1998). Exploring the basic ecological unit: ecosystem-like concepts in traditional societies. Ecosystems 1(5):409–415.
- Blackstock, K.L., Kelly, G.J., Horsey, B.L., (2007). *Developing and applying a framework to evaluate participatory research for sustainability*. Ecological Economics 60, 726–742.
- Buchy, M., Hoverman, S. & Averill, C. (1999) Understanding *public participation in forest planning in Australia: how can we learn from each other*? Forestry Occasional Paper No. 99.2 (Canberra, Australian National University).
- Buchy, M. and Race, D. (2010). The twists and turns of community participation in Natural resource Management in Australia: what is missing?, Journal of Environmental Planning, 44:3, 293-308
- Burroughs, R. (1999) When stakeholders choose: process, knowledge, and motivation in water quality decisions, Society and Natural Resources, 12, pp. 797–809

- Brand, D.G., Roberts, R.W. and Kemp, R. (1993) International initiatives to achieve sustainable management of forests: Canada's model forests, the Commonwealth Forestry Initiative, and the development assistance community, Commonwealth Forestry Review, 72(4), pp. 297–302.
- Chase, L.C., Decker, D.J., Lauber, T.B., (2004). *Public participation in wildlife management: What do stakeholders want?* Society and Natural Resources 17, 629–639.
- Chess, C., Purcell, K., (1999). *Public participation and the environment do we know what works*. Environmental Science and Technology 33, 2685–2692.
- Chambers, R., (1983). Putting the Last First. Rural Development Longman, London.
- Chambers, R. (1997). Whose Realities Count? Putting the First Last (London, Intermediate Technology).
- Claridge, C.L. (1997) Successful Community-based Environmental Management through Individual and Group Empowerment Strategies (Brisbane, Centre for Integrated Resource Management, Department of Natural Resources, Queensland).
- Coakes, S. (1998) Valuing the social dimension: social assessment in the Regional Forest Agreement process, Australian Journal of Environmental Management, 5(1), pp. 47–54.
- Colchester, M., and L. Lohmann, eds. (1993). The struggle for land and the fate of the forests. Penang: World Rainforest Movement
- Colfer, C.J.P. (1995) Who counts most in sustainable forest management?, CIFOR Working Paper No. 7 (Bogor, Centre for International Forestry Research (CIFOR)).
- Cornwall, A. (1995) *Towards participatory practice: PRA and the participatory process*, in: K. de Koning (Ed) Participation and Health (London, Zed Books).
- Croll, E., and D. Parkin, eds. (1992). Bush base: Forest farm, culture, environment and development. London: Routledge.
- Dargavel, J. (1980) The political detection of an Australian forestry perspective, Australian Forester, 43(11), pp. 5–15.
- Davis, G. (1996) Consultation, Public Participation and the Integration of Multiple Interests into Policy Making (Paris, Organization for Economic Co-operation and Development).
- Forester, J. (1989). Planning in the face of power. Berkeley: University of California Press.
- Friedmann, J. (1973). Retracking America. Garden City, NY: Anchor Press/Doubleday.
- Goodland, R., G. Ledec, and M. Webb. (1990). *Meeting environmental concerns caused by common-property mismanagement in economic development projects. In Common property resources: Ecology and communitybased sustainable development*, ed. F. Berkes, 149–163. London: Belhaven Press.
- Grimble, R. J. and Quan, J. (1993) *Tree resources and the environment: stakeholders and trade-offs:* phase I an analytical review. NRI, Chatham (unpublished).
- Guijt, I. & Shah, M.K. (1998) The Myth of Community: Gender Issues in Participatory Development (London, Intermediate Technology).
- Hickey, S., Mohan, G., (2005). *Participation: from tyranny to transformation?* Exploring new approaches to participation in development. Zed Books.
- Horowitz, M. M., and T. Painter. (1986). Anthropology and rural development in West Africa. Boulder, CO: Westview Press.
- Kothari, U., (2001). *Power, Knowledge and Social Control in Participatory Development*. In: Cooke, B., Kothari, U. (Eds.), Participation: the New Tyranny? Zed Books, London, pp. 139–152
- Kaufman, M. (1997) Differential participation: men, women and popular power, in: M. Kaufman & H. D. Alfonso (Eds) Community Power and Grassroots Democracy: The Transformation of Social Life (London, Zed Books).
- Kelly, R. & Alper, D. (1995) *Public participation in land use planning:* an assessment of the Vancouver Island Core Table, paper presented at the British Columbia Political Studies Association Conference, Victoria, 4–6 May.
- Krannich, R. S., M. S. Carroll, S. E. Daniels, and G. B. Walker. (1994). *Incorporating social assessment and public involvement processes into ecosystem-based resource management: Applications to the East Side Ecosystem Management Project*. Walla Walla, WA: USDA Forest Service
- Lachapelle, P.R., Mccool, S.F., and Patterson, M.E. (2003): Barriers to Effective Natural Resource Planning in a "Messy" World, Society & Natural Resources: An International Journal, 16:6, 473-490
- Lauber, T. B. and B. A. Knuth. (1998). Refining our vision of citizen participation: Lessons from a moose reintroduction proposal. Society Nat. Resource: 411–424.
- Little, P. D. (1994). The link between local participation and improved conservation: A review of issues and experiences. In Natural connections: Perspectives in community-based conservation, ed. D. Western and M. Wright, 347–372. Washington, DC: Island Press.

- Mccool,S.F., and Guthrie, K. (2001): Mapping the Dimensions of Successful Public Participation in Messy Natural Resources Management Situations, Society & Natural Resources: An International Journal, 14:4, 309-323
- McNeely, J. (1995). IUCN and indigenous peoples: How to promote sustainable development. In *The cultural dimension of development: Indigenous knowledge systems*, eds. D. M. Warren, L. J. Slikkerveer, and D. Brokensha, pp. 445^50. London: Intermediate Technology Publications.
- Miller, K. R., W. V. Reid, and C. V. Barber. (1991). Deforestation and species loss. In Preserving the global biodiversity: The challenge of shared leadership, ed. J. T. Mathews, 76–111. New York: W. W. Norton.
- Moore, S. A. (1994). Interaction processes and the resolution of environmental disputes: Case studies from public land planning in the United States and Australia. College of Forestry, University of Washington, Seattle, WA.
- Nelson, N., Wright, S., (1995). *Power and participatory development: Theory and practice*. Intermediate Technology Publications, London.
- Nelson, F. and Agrawal, A. (2008). Patronage or Participation? Community-based Natural Resource Management Reform in Sub-Saharan Africa. Development and Change 39(4): 557–585 (2008). Blackwell Publishing, Oxford
- Ostrom, V. (1997). The meaning of democracy and the vulnerability of democracies: A response to Tocqueville's challenge. Ann Arbor: University of Michigan Press.
- Pretty, J.N., (1995a). Participatory learning for sustainable agriculture. World Development 23, 1247–1263.
- Pretty, J.N., (1995b). *A trainer's guide for participatory learning and action*. International Institute for Environment and Development.
- Pretty, J., Guijt, I., Scoones, I. & Thompson, J. (1995) Participatory Learning and Action: A Trainer's Guide (London, International Institute for Environmental Development). Renn, O., Webler, T., Wiedemann, P. (Eds.), 1995. Fairness and Competence in Citizen Participation. Kluwer Academic Publishers, Dordrecht.
- Rahman, A. (1993) People's Self Development: Perspectives on Participatory Action Research (London, Zed Books).
- Rowe, G., Frewer, L., (2000). Public participation methods: a framework for evaluation in science. Technology and Human Values 25, 3–29.
- Snowdon, P. & Slee, B. (1996) *Community based action in forest management*, paper presented at the Rural Economy and Society Study Group Annual Conference, Bangor, 1996.
- Spellerberg, I. F. (2005). Monitoring ecological change. Cambridge University Press, Cambridge, United Kingdom.
- Steelman, T.A, & Asher, W. (1997) Public involvement in natural resource policy making: advantages, disadvantages and trade-offs, Policy Sciences, 30, pp. 71–90. van Tatenhove, J.P.M., Leroy, P., (2003). Environment and participation in a context of political modernisation. Environmental Values 12, 155–174.
- Thompson, W. L., G. C. White, and C. Gowan. (1998). *Monitoring vertebrate populations*. Academic Press, San Diego, California.
- UNCED, (1992). Nations of the Earth Report, vols. I-III, Geneva: United Nations
- van Tatenhove, J.P.M., Leroy, P., (2003). *Environment and participation in a context of political modernisation*. Environmental Values 12, 155–174.
- Warburton, D. (1997) Participatory Action in the Countryside: A Literature Review (Cheltenham, Countryside Commission).
- Webler, T., Tuler, S., (2006). Four perspectives on public participation process in environmental assessment and decision making. Policy Studies Journal 34, 699–722.
- Webler, T., Tuler, S., Krueger, R., (2001). *What is a good public participation process*? Environmental Management 27, 435–450.
- Wondolleck, J. M., and S. L. Yaffee. (1994). Building bridges across agency boundaries: In search of excellence in the United States Forest Service. Ann Arbor: School of Natural Resource and Environment, University of Michigan.
- World Bank, (1996). The World Bank participation sourcebook Washington, DC: World Bank.
- Worster, D. (1993). *The wealth of nature: Environmental history and the ecological imagination*. New York: Oxford University Press