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Women, Decision Making and Sustainability: Exploring the Experience of the Badi Foundation in Rural China

Lori Noguchi and Shahla Ali***

Empowering women in rural communities to play a substantial role in decision-making processes is essential to sustainable development. In 1987, the World Commission on Environment and Development recognized that sustainable resource management requires empowering communities to make decisions affecting their own development interests.¹ Later, in 1992, the commission specified that this goal required empowering local women to participate in such decision making.² Subsequent international conventions, such as the Convention on Biological Diversity, the 1994 International Conference on Population and Development, the 1995 Beijing Declaration and Platform for Action, the 2002 World Summit on Sustainable Development, and the 2005 World Summit, have promoted local collaborative processes to manage and protect community resources, and have emphasized the importance of involving the women of those communities in those collaborations. While these international conventions do not have binding legal effect on nations, such instruments nevertheless constitute a powerful moral force

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1. WORLD COMM'N ON ENV'T & DEV., OUR COMMON FUTURE 47 (1987). "Well-enforced laws and strict liability legislation can control harmful side effects" of environmental degradation however, "effective participation in decision-making processes by local communities can help them articulate and effectively enforce their common interest." *Id.*

2. United Nations Conference on Environment and Development, Rio de Janeiro, Braz., June 3-14, 1992, *Agenda 21*, U.N. Doc. A/CONF.151/26/ (Vol. III), ch. 24, ¶ 3b (Jun. 14, 1992).

acknowledging the pivotal role women play in sustainable development and in decision making at the grassroots level.

Such decision-making processes involve stakeholders from both the public and private sectors, who consult to arrive at shared goals regarding resource use and planning. There has been a great deal of scholarship on the requirements and parameters of participatory decision-making processes.³ However, there is too little systematic attention paid to developing a capacity for meaningful participation in local decision making, to consultation and collaboration, or to the important roles scientific understanding and personal empowerment play in this process. This Article explores the question of how to develop decision-making capacity using a participatory research approach, drawing on the experience of those directly involved in implementing local empowerment projects.

Part I of this Article explores international treaties that promote the development of grassroots decision-making capacity and the importance of fostering women's participation in decisions about sustainable development. Part II reviews relevant scholarly findings on the importance of women's participation in decision making for sustainable development. Finally, Part III presents the Badi Foundation's experience in enhancing women's decision-making capacity at the community level in rural China.

I. INTERNATIONAL TREATIES PROMOTING WOMEN'S GRASSROOTS DECISION MAKING

Throughout the past nineteen years, the United Nations has hosted five conventions focused on encouraging local community involvement in managing and protecting the interests of local communities in sustainable development of community resources. The International Conference on Population and Development (1994), the Beijing Declaration and Platform for Action (1995), the World Summit on Sustainable Development (2002), and the 2005 World Summit all advanced women's participation in community decision making. Each convention acknowledged the pivotal role women play in sustainable development and decision making at the grass-roots level. This section examines the importance of each of these conventions in promoting women's involvement in decision making. These summits have produced an international moral framework for local

3. See, e.g., Carlo Giupponi, et al., *Participatory Approach in Decision Making Processes for Water Resources Management in the Mediterranean Basin* (Fondazione Eni Enrico Mattei, Working Paper No. 101.06, 2006); Carlo Giupponi, et al., *Participatory Modelling and Decision Support for Natural Resources Management in Climate Change Research* (Fondazione Eni Enrico Mattei, Working Paper No. 13.08, 2008); Marc B. Mihaly, *Citizen Participation in the Making of Environmental Decisions: Evolving Obstacles and Potential Solutions Through Partnership with Experts And Agents* 27 PACE ENV'T L. REV. 151 (2009-2010).

community organizations, such as the Badi Foundation in China, to assist women in realizing the value and power of their decision making within their families and communities.

A. THE INTERNATIONAL CONFERENCE ON POPULATION AND DEVELOPMENT

At the 1994 International Conference on Population and Development, 182 participating countries, including China, agreed that “[t]he empowerment and autonomy of women and the improvement of their political, social, economic and health status [was] a highly important end in itself.”⁴ A main goal of the Conference was to make rural women more aware of their capabilities and their rights. To that valuable end, participants proposed a series of objectives, including the following:

[t]o ensure the enhancement of women’s contributions to sustainable development through their full involvement in policy- and decision-making processes at all stages and participation in all aspects of production, employment, income-generating activities, education, health, science and technology, sports, culture and population-related activities and other areas, as active decision makers, participants and beneficiaries.⁵

The Conference’s joint resolution mandated that countries establish “mechanisms for women’s equal participation and equitable representation at all levels of political process and public life.”⁶ The resolution encourage countries to help women fulfill this potential “through education, skill development and employment”⁷ According to the objectives of the Conference, women should be able to “buy, hold and sell property and land equally with men, obtain credit and negotiate contracts in their own name and on their own behalf and exercise their legal rights to inheritance.”⁸ Participants agreed that “[e]very effort should be made to encourages the expansion and strengthening of grass-roots, community-based groups for women.”⁹ These groups, in turn, would inspire nationwide efforts to “foster women’s awareness of the full range of their legal rights.”¹⁰

4. International Conference on Population and Development, Cairo, Egypt, Sept. 5–13, *Programme of Action of the International Conference on Population and Development*, 1994, U.N. Doc. A/CONF.171/13, Annex, Ch. IV, §A, ¶ 4.1 (Sept. 13, 1994) [hereinafter *International Conference on Population and Development*].

5. *Id.* at ¶ 4.3(b).

6. *Id.* at ¶ 4.4(a).

7. *Id.* at ¶ 4.4(b).

8. *Id.* at ¶ 4.6.

9. *Id.* at ¶ 4.12.

10. *Id.*

B. THE BEIJING DECLARATION AND PLATFORM FOR ACTION

In 1995, the Fourth World Conference on Women held in Beijing, China, passed three resolutions pertaining to the status and advancement of women, one of which was the Beijing Declaration and Platform for Action (the "Beijing Declaration").¹¹

The Beijing Declaration outlined further steps to improve the status of women, focusing on the current situation of women's decision-making powers throughout the world. At the administrative level, governments committed to creating gender balance in governmental bodies, committees, public administrative entities, and the judiciary.¹² Governments also committed to encouraging political parties to include women in elective and nonelective public positions,¹³ and to supporting organizations and research focusing on women's participation in decision making.¹⁴ Finally, governments committed to promoting more frequent and meaningful involvement of indigenous women in decision making.¹⁵

The Beijing Conference recognized that strengthening local women's decision-making powers depended, at least in part, upon the concerted efforts of the public and private sector actors. The conference called upon members of the government, the private sector, trade unions, grassroots organizations, and academic institutions to "create or strengthen mechanisms to monitor women's access to senior levels of decision making," and review criteria for recruiting people to decision-making bodies.¹⁶ To build women's capacity to participate in decision making, the Beijing Conference called upon governments and private organizations to provide leadership and empowerment training for women and girls,¹⁷ and to create a mentoring and training system for women in areas such as self expression and analysis.¹⁸

C. THE CONVENTION ON BIOLOGICAL DIVERSITY AND THE WORLD SUMMIT ON SUSTAINABLE DEVELOPMENT

The Convention on Biological Diversity, opened for signature in June 1992, secured member nations' commitment to promote global biological diversity through "the sustainable use of its components and the fair and equitable sharing of the benefits arising out of the utilization of genetic resources, including by appropriate access to genetic resources and by

11. Fourth World Conference on Women, Beijing, China, Sept. 4–15, 1995, *Beijing Declaration and Platform for Action*, U.N. Doc. A/CONF.177/20/Rev.1 (Sept. 15, 1995).

12. *Id.* at *Platform for Action*, ¶ 190(a).

13. *Id.* at *Platform for Action*, ¶ 190(b).

14. *Id.* at *Platform for Action*, ¶ 190(f).

15. *Id.* at *Platform for Action*, ¶ 190(g).

16. *Id.* at *Platform for Action*, ¶ 177(b).

17. *Id.* at *Platform for Action*, ¶ 192(b).

18. *Id.* at *Platform for Action*, ¶ 195(c).

appropriate transfer of relevant technologies.”¹⁹ One core objective of the Convention was to involve local communities and indigenous populations in this global effort to preserve biological diversity.²⁰ Women’s involvement was considered a key component. Focusing directly on the role of women in decision making regarding conservation, the Preamble to the Convention on Biological Diversity recognized the “vital role that women play in the conservation and sustainable use of biological diversity and affirm[ed] the need for the full participation of women at all levels of policy-making and implementation for biological diversity conservation.”²¹

Following the Convention on Biological Diversity, the 2002 World Summit on Sustainable Development similarly called on participating countries to commit to designing energy policies that would meet the needs of women, improve the environment, and help eradicate poverty.²² In the Plan of Implementation, countries specifically pledged to promote sustainable development and biological diversity, and to combat poverty by empowering women. Thus it was crucial in order to:

[p]romote women’s equal access to and full participation in, on the basis of equality with men, decision-making at all levels, mainstreaming gender perspectives in all policies and strategies, eliminating all forms of violence and discrimination against women and improving the status, health and economic welfare of women and girls through full and equal access to economic opportunity, land, credit, education and health-care services.²³

D. JOHANNESBURG WORLD SUMMIT OUTCOME

Finally, in 2005, participating countries in the Johannesburg World Summit adopted the 2005 World Summit Outcome, which focused on further promoting gender equality and the empowerment of women.²⁴ Reaffirming the goals and objectives of the Beijing Declaration and Platform for Action, parties to the 2005 World Summit pledged to “[eliminate] gender inequalities in primary and secondary education by the

19. Convention on Biological Diversity art. 1, June 5, 1992, 1760 U.N.T.S. 79.

20. *Id.* at Preamble ¶ 12 (“Recognizing the close and traditional dependence of many indigenous and local communities embodying traditional lifestyles on biological resources, and the desirability of sharing equitably benefits arising from the use of traditional knowledge, innovations and practices relevant to the conservation of biological diversity and the sustainable use of its components”) (emphasis in original); *Id.* at art. 10(d) (wherein each party pledged to “[s]upport local populations to develop and implement remedial action in degraded areas where biological diversity has been reduced . . .”).

21. *Id.* at Preamble.

22. See World Summit on Sustainable Development, Aug. 26–Sept. 4, 2002, *Plan of Implementation*, U.N. Doc. A/CONF.199/L.1 [hereinafter *World Summit on Sustainable Development*].

23. *Id.* at ch. II, ¶ 7(d).

24. 2005 World Summit Outcome, G.A. Res. 60/1, U.N. Doc. A/RES/60/1 (Sept. 16, 2005).

earliest possible date, and at all educational levels by 2015.”²⁵ The parties committed to “[g]uaranteeing the free and equal right of women to own and inherit property and ensuring secure tenure of property and housing by women.”²⁶ The principle of “equal access of women to productive assets and resources, including land, credit and technology” was also adopted.²⁷ Finally, countries committed to eliminating discrimination and violence against women,²⁸ and to providing greater representation in government decision-making bodies and processes.²⁹

These international conventions indicate that the world's governments have successively reaffirmed their commitment to ensuring women's participation in decision-making processes at all levels, encouraging the use of collaborative processes in the local sphere to manage and protect community resources. Each of these summits acknowledged that crucial environmental decisions are made at the local, not national, level, and that women play a critical role in guiding those decisions and thus in advancing development and resource management within their own communities. The commitment by local private organizations and local governments to provide women with opportunities to build and develop their individual capabilities for participation in environmental decision making is an important step in making environmental protection a reality.

II. FINDINGS REGARDING THE IMPORTANCE OF WOMEN'S PARTICIPATION IN DECISION MAKING REGARDING SUSTAINABLE DEVELOPMENT

Several recent articles have examined the nature, importance, and role of women's participation in natural resource decision making. They indicate that women's active participation in decision making regarding local resources is an important element of community development. While such insights are helpful in outlining the value of women's contributions, further systematic attention is needed to discover how women's capacities for genuine participation in local decision making, consultation, and collaboration are developed.

Training women to be empowered and enhancing their scientific understanding are also important. The recent International Fund for Agriculture and Development (IFAD) report, “Enhancing the Role of Indigenous Woman in Sustainable Development—IFAD Experience with Indigenous Woman in Latin America and Asia,” emphasized the importance of women's participation in grassroots decision making for

25. 2005 World Summit Outcome, *supra* note 24, at ¶ 58(a).

26. *Id.* at ¶ 58(b).

27. *Id.* at ¶ 58(e).

28. *Id.* at ¶ 58(f).

29. *Id.* at ¶ 58(g).

sustainable development.³⁰ This study reported that a strong focus on the enhancement of women's literacy, participation in decision making, and access to credit is key to community progress.³¹ IFAD concluded that, because indigenous women often possess traditional knowledge that can be useful for effective environmental stewardship, and are particularly vulnerable to economic and social marginalization, "gender equality and women's empowerment are both objectives of, and instruments for, poverty reduction."³²

In addition to promoting women's participation in decision making at the local level, recent studies have recognized the importance of gender parity in management bodies that address environmental development. Thais Corral, in her article "Women's Perspectives on Sustainable Development in Brazil," described examples of local Brazilian sustainability initiatives.³³ Among the insights she gained by observing these initiatives is the importance of balancing the proportion of women at all levels of the local management bodies that address environmental development.³⁴ Corral also correlated these factors with improved access to drinking water and environmental development; because women are generally the primary water gatherers, they are uniquely situated to make informed decisions about community irrigation and water supply projects.³⁵

This new scholarly emphasis on women's participation in the management of environmental resources reflects a transition in academic thinking regarding women's roles in relation to the environment. Rosi Braidotti reported in her book, "Women, the Environment and Sustainable Development: Towards a Theoretical Synthesis," that the recognition of limits to development has fueled the search for sustainable solutions.³⁶ Women's participation in environmental management is now encouraged, in recognition of women's "privileged knowledge and experience of working closely with the environment."³⁷ Braidotti referred to academics such as Vandana Shiva and Irene Dankelman, who also explore women's "nurturing capacities in relation to nature" as an additional resource

30. International Fund for Agriculture and Development [IFAD], *Enhancing the Role of Indigenous Woman in Sustainable Development: IFAD Experience with Indigenous Women in Latin America and Asia*, Third Session of the Permanent Forum on Indigenous Issues, (2005) <http://www.ifad.org/english/indigenous/pub/documents/indigenouswomenReport.pdf> [hereinafter *IFAD Report*].

31. *Id.*

32. *Id.*

33. Thais Corral, *Women's Perspectives on Sustainable Development in Brazil*, in REGIONAL SUSTAINABLE DEVELOPMENT REVIEW, AREA STUDIES—BRAZIL, ENCYCLOPEDIA OF LIFE SUPPORT SYSTEMS 1, 1 (Luis Enrique Sanchez, Ed.)(2000).

34. *Id.*

35. *Id.*

36. ROSI BRAIDOTTI ET. AL, WOMEN, THE ENVIRONMENT AND SUSTAINABLE DEVELOPMENT: TOWARDS A THEORETICAL SYNTHESIS 2–3 (1994).

37. BRAIDOTTI *Id.* at 2.

guiding women's decision making.³⁸ Braidotti elaborated that, in formulating environmental solutions, "there has been a shift in positions and political priorities" in recent years.³⁹ While women were historically seen as "victims of the environmental crisis," they are now regarded as being crucial to the solution.⁴⁰ The roles have shifted; women now may play the part of "efficient environmental managers within the development process."⁴¹

Finally, other research has shown that environmental and natural resource agencies now tend to devolve decision-making influence to local multi-stakeholder, collaborative groups.⁴² Sheila Foster examined this shift and explains that the emerging emphasis on local decision-making mechanisms—such as forestry and watershed partnerships and community advisory committees—evidences the need for more creative local solutions to the current generation of environmental problems.⁴³ Foster observed that this devolution also reflects a need for improved decision-making processes in order to identify and equitably distribute the costs and benefits of environmental decisions.⁴⁴ Foster noted that devolution requires decision makers to take special care to ensure that unequal access to resources does not hamper genuine participation and representation in decision making.⁴⁵

The importance of women's roles in natural resource decision making is evident, but further research is needed on how best to promote women's participation in local decision making around these important community interests. There is also a need for more empirical research on the nexus between these local community decisions, empowerment methods, and scientific understanding. If women are crucial actors in achieving local success in sustainable development, then it is vital to make women aware of their capacity to contribute, and to provide access to relevant information about sustainability.

The next section will examine how the Badi Foundation, a not-for-profit organization with projects in rural China, provides educational and training opportunities that enable women to more effectively participate in local decision making. The Foundation fosters new and innovative production systems, helps women to start small, locally managed civil-society organizations, supports community groups carrying out useful projects, and assists government-sponsored efforts to promote sustainable

38. BRAIDOTTI ET. AL, *supra* note 36, at 2.

39. *Id.*

40. *Id.*

41. *Id.*

42. Sheila Foster, *Environmental Justice in an Era of Devolved Collaboration*, 26 HARV. ENVTL. L. REV. 459, 483–84 (2002).

43. *Id.* at 474.

44. *Id.* at 474, 480.

45. *Id.* at 471, 484–85.

production systems. As the above research has shown, the evolving shift toward emphasizing women's participation in public decision making requires creative strategies in order to develop that participation to its fullest potential.

III. EXPERIENCE OF THE BADI FOUNDATION IN BUILDING WOMEN'S DECISION-MAKING CAPACITY AT THE COMMUNITY LEVEL

The Badi Foundation is a not-for-profit, nongovernmental organization dedicated to releasing the potential of individuals and institutions in China to advance their own communities.⁴⁶ It collaborates with government agencies and local organizations to design education and training programs. The programs promote balanced community development that harmonizes economic progress, environmental protection, and social cohesion, with a particular emphasis on involving women and youth in rural areas.⁴⁷ Founded in 1990, the Foundation is headquartered in Macau and has been working in mainland China since 1992. Through its work in China, the Foundation recognized the serious environmental problems facing the country and the important—and often undervalued—role that women have to play in the development of rural and semi-rural areas. In addition to their pivotal role in educating their children and managing their households, women are the primary work force in agriculture and agricultural enterprises in the rural areas.⁴⁸

In recent years, as men have taken up jobs in urban factories and on construction crews, women are often left to manage production systems and family businesses. As a result, their decisions significantly impact the well-being of their families, as well as the environment in which they live.⁴⁹ Yet, often due to limited education and lack of self-confidence, decision making related to production and other aspects of sustainability is left in the hands of husbands or fathers-in-law.⁵⁰

In response, the Foundation developed an Environmental Action Program (EAP) to provide rural women with greater educational and training opportunities, and to enable them to contribute more effectively to the sustainable development of their communities.⁵¹ The EAP introduces participants to the concept of sustainable development and the science of ecology, which helps participants better understand how scientific

46. See generally BADI FOUNDATION, <http://www.badi-foundation.org/> (last visited Feb. 14, 2011).

47. *Id.*

48. See FARHANA HAQUE RAHMAN, *THE STATUS OF RURAL WOMEN IN CHINA* (1995).

49. See generally e.g., Keiko Wakabayashi, *Migration from Rural to Urban Areas in China*, 28 *DEVELOPING ECONOMIES* 503 (1990) (describing China's increasing "floating population" of mostly male workers, streaming from rural to urban areas).

50. RAHMAN, *supra* note 48, at 24.

51. See generally BADI FOUNDATION, *supra* note 46.

principles can be applied to developing sustainable production systems.⁵² It also familiarizes participants with relevant technical vocabulary and the science behind both traditional and innovative agricultural programs, so that the women are more comfortable approaching local experts and are better able to understand related scientific literature and promotional materials that may be available.⁵³ Moreover, the program empowers women to recognize their own ability to contribute to the advancement of their communities and take a leading role in bringing about the betterment of the lives of their families and villages.⁵⁴ The participants first engage in a five-day program that encourages them to analyze their own communities and production systems and identify how they could contribute to the advancement of those communities. Participants work together to implement projects they themselves have designed to benefit their communities. Throughout the following months, local collaborating organizations and Badi Foundation staff meet with the women and assist them in their efforts to address the issues and opportunities that they have identified.

Since 2000, the Badi Foundation and collaborating community-based organizations have used the EAP to train a total of 3929 people in China in Gansu, Shaanxi, Shanxi, Hebei, Sichuan, Yunnan, Hunan, and Guangdong provinces.⁵⁵ After completing the program, participants have gone on to adopt new and innovative production systems (such as biogas fuel generation systems and drip irrigation systems), start small businesses (such as opening restaurants, collectively raising cattle, and producing handicrafts for local sale), organize the community to carry out useful projects (such as building a bridge to facilitate transportation in and out of the village), and assist government-sponsored efforts to build greenhouses and promote other sustainable production systems.⁵⁶ While the program was not created specifically to enhance the role of women in decision making, results show that participants in the program both actively

52. Badi Foundation EAP Training Materials (on file with author L. Noguchi).

53. *Id.*

54. *Id.*

55. *China Programs Annual Report 2009*, BADI FOUNDATION, available at <http://www.badi-foundation.org/pdf/Badi%20Foundation%20Annual%20Report%2009%20English.pdf> [hereinafter *China Programs Annual Report 2009*]. Though the Badi Foundation has done a number of follow up studies over the years, most were relatively small and the specific focus varied. Another study of 87 participants found in the Badi Foundation's 2005 Annual Report indicates 80% of participants in one village and 100% in another undertook economic activities, and 95% and 100% respectively undertook social projects, and 100% undertook environmental activities. Details related to decision making were not included. A 2004 internal study of 133 participants indicates 99% subsequently participated in village meetings, 78% consulted with leaders and local experts, and 65% reported participating in family decision making. (data on file with author L. Noguchi).

56. Badi Foundation, 2010 Internal Report (on file with author L. Noguchi).

undertake projects related to production or community well-being and participate more actively in family and community-level decision making.⁵⁷

Although much of the evidence of the impact of the program on decision making is anecdotal, one small internal study carried out in 2006 provides some objective data on several topics related to decision making. In March of 2006, the Badi Foundation started the Building the Harmonious Community—Environmental Action Program for several townships in Yilong County, Sichuan Province. Fifty-five women participated in the program. The EAP included a course on mental models, relationships, consultation, planning, and ecosystems. The EAP also included facilitator training for participants interested in starting similar efforts in their individual communities. Twenty-two women participated in this facilitator training. Six months after the training, the Badi Foundation visited and surveyed thirty-five of the participants regarding their post-training community involvement. The study, which compared participant self-evaluation of thirty-five women before the training with that of the women approximately six months after training in Yilong County, Sichuan Province, showed the following results:⁵⁸

Table: Survey of Thirty-Five Women Participants in Yilong County, Sichuan Province, 2006

	Pre Training	Post Training
Consult with family members before making important decisions	27%	100%
Actively consult with leaders to find ways/scientific knowledge to solve problems	39%	88%
Actively motivate others to participate in charitable activities in the community	0%	55%
Actively participate in consultation about community affairs	24%	55%
Started Economic Activities	27%	100%

The responses provided to the first four survey questions demonstrate that program participants considered themselves more willing and able to

57. Badi Foundation, 2010 Internal Report, *supra* note 56.

58. Badi Foundation, 2006 Internal Study (on file with author L. Noguchi).

consult with others about issues affecting their lives.⁵⁹ The greatest impact was on family-level decision making and consultation about specific problems. Participation in community-level decision making, including encouraging others to undertake charitable activities, showed less of a dramatic change, although there was still evidence of a positive change.⁶⁰

The change in community-level decision making is best understood within the cultural context of rural areas. Community decision making generally refers to participation in village meetings, where village leaders present programs or activities to all members of the village and seek their support for proposals. It also includes membership on village committees. In most communities, it is somewhat rare to see women attend village meetings, as they are considered "men's business."⁶¹ Even if women do participate, standing up to speak is rarer still, due to a historical tradition and cultural expectation that men will take the lead in decision making and community affairs.⁶² In the case of village committees, recent studies suggest that the participation of women on such committees is around sixteen percent, and that women only chair such committees approximately one percent of the time.⁶³ Given the strong cultural bias against women's participation in such committees and community meetings, it is not surprising that gains in this area would be modest.

Several aspects of the EAP directly impact participation in decision making related to sustainable development and in other aspects of their home and community life.⁶⁴ In particular, the Badi Foundation has found that the EAP:

1. Empowers women by helping them recognize that they are able to contribute to their community's development;
2. Enables participants to collaborate more effectively with their peers by providing training in consultation and a framework to explore models of decision making and leadership; and
3. Builds the capacity of women to apply scientific knowledge.

A more detailed example of how the program impacted one group of fifteen women may help to illustrate how the program empowers women, enhances collaboration in the community, and builds scientific knowledge.

59. Badi Foundation, 2006 Internal Study, *supra* note 58.

60. *Id.*

61. *See generally* RAHMAN, *supra* note 48, at 24.

62. *Id.* According to the study, a greater proportion of men/husbands reported participation in village meetings (51.7%) as compared with women/wives (14.4%). *Id.*

63. Jude Howell, *Women's Political Participation in China: In Whose Interests Elections?* 15 J. CONTEMP. CHINA, 603, 607 (2006).

64. *See China Programs Annual Report 2009, supra* note 55.

A. BRIDGE BUILDING IN SAI DIAO

In the village of Sai Diao, in De Hong, Ying Jiang County in the Dai Autonomous Region of Southern Yunnan, a local facilitator of the EAP program recently trained fifteen women, all of whom are from the Dai minority. Sai Diao is a small village, and as in most villages in China, each member of the village is assigned land for farming and animal husbandry.⁶⁵ Efforts are made to distribute the land fairly, so that each family has enough good farm land to sustain themselves, and no one family gets a significant advantage over the others. As a result of this system, most families have several plots of land in different locations—some very close to their homes, but other plots further out from the village. In the case of the women who participated in the training, some of their land was across a small river from the village. The river is not deep, but the women were naturally reluctant to walk through the water each day on their way to their fields. As a result, each day they walked over an hour out of the way to get to a crossing, then walked back to their fields. The return trip was, of course, the same. After the training, the women realized they could make their own lives, and the lives of their community members, easier by building a simple bridge across the river near the village. They then mobilized members of their community to build a bamboo bridge and a road to facilitate transportation into and out of the village.⁶⁶

Some of the participants also implemented a sustainable biogas generation system known as the four-in-one system.⁶⁷ The four-in-one system combines a biogas generator with sanitary toilets, a greenhouse, and a place for raising pigs.⁶⁸ The pigs are raised within or just outside the greenhouse, and the placement of the biogas generator and toilet allows for both animal and human waste to flow into the biogas generator. The village uses gas from the generator for cooking and for powering lights. This reduces the need to collect fuel, which is a drain on the time and energy of rural people and speeds the process of local deforestation. Liquid waste from the biogas generator can be used as fertilizer in the greenhouse, which is often used to raise crops that can be sold at market, while the generator's solid wastes are used to fertilize nearby fields. Although most of the participants in the training already used biogas generators, the women found that a modified system introduced in the EAP course was more efficient than the types they previously used, and, drawing on local

65. See generally ZHAI Rongxin, LIU Yansu, *Dynamic Evolvement of Agricultural System and Typical Patterns of Modern Agriculture in Coastal China: A Case of Suzhou* available at http://sourcedb.cas.cn/sourcedb_ignrr_cas/zw/lw/201001/P020100104393432725239.pdf (last visited Apr. 20, 2011).

66. Badi Foundation, 2010 Internal Report, *supra* note 56.

67. *Id.*

68. See Gehua Wang, "Four-in-one" Model and the Development of Household Biogas in Northern China, 21 INT'L J. GLOBAL ENERGY ISSUES 110 (2004).

experts for advice, they modified their own biogas systems based on what they had learned in the program.⁶⁹ Two program participants whose families had not previously used biogas systems implemented the four-in-one system.⁷⁰

In addition to implementing or modifying their biogas generators, women who participated in the program began to diversify their cropping systems to use resources more effectively, a decision based on the scientific knowledge they had gained in the course.⁷¹ Participants also indicated that although they had not participated in technical training offered in the village prior to the training because they thought it was not relevant to them. However, after completion of the course, they came to feel that they would try to participate any time such training is offered.⁷²

B. EMPOWERING WOMEN TO CONTRIBUTE IN COMMUNITY DEVELOPMENT

True empowerment requires recognition of the value of one's own potential to help solve community problems. Empowerment is formally defined as giving or delegating power or authority to a particular individual or group.⁷³ In the context of community decision making, empowerment can encourage access to decision making and political processes. This access can be achieved in a number of ways. One approach is to organize campaigns to share information about personal rights, and about ways in which individuals can take advantage of the channels available ("know the law" projects).⁷⁴ A second way to achieve access for women in decision making is to implement quotas for women in leadership positions (as was previously the case in China).⁷⁵ But even where information is available, making use of that information and taking advantage of opportunities that are created through quotas and other mechanisms require women to first

69. Badi Foundation, 2010 Internal Report, *supra* note 56.

70. *Id.*

71. *Id.*

72. *Id.*

73. 5 OXFORD ENGLISH DICTIONARY 192 (2d ed. 1989).

74. Examples of such workshops and trainings include those carried out by the All China Women's Federation to educate women on their legal rights to land after the implementation in 2002 of the Rural Land Contract Law, which legislates that "*women have the equal rights as men in contracting the rural land*" (emphasis in original). Int'l PLE, *Women's rights and public legal education in China*, PUB. LEG. EDU. NETWORK (Nov. 5, 2010, 1:37 PM), <http://www.plenet.org.uk/introduction/womens-rights-and-public-legal-education-in-china,10215,FP.html>. Workshops have sought to familiarize rural women with the law and to identify actions that can be taken if their rights were not upheld, for example, such as when a woman moves to her husband's village, but she is not granted land in that village but her original village land is redistributed to someone else. Similar educational programs, related to migrant labor laws and domestic-abuse related laws, are held by the All China Women's Federation and sometimes also by universities related to migrant labor laws and domestic abuse related laws. *See, e.g., id.*

75. Wang Qingshu, *The History and Current Status of Chinese Women's Participation in Politics*, in *HOLDING UP HALF THE SKY: CHINESE WOMEN PAST, PRESENT, AND FUTURE* 92, 92-106 (Tao Jie, Zheng Bijun, & Shirley L. Mow eds., 2004).

believe in their own worth and the value of the contributions they can make.

The EAP has helped empower women to recognize their value and, as a result, has inspired them to contribute to their own development. For example, one participant from Wuba Country confided, "Before I thought that rural women were just good for staying at home with children, every day revolving around the stove, but now I don't think that. I feel that rural women can walk out the door [and contribute to society]. My thinking has entirely changed."⁷⁶

One of the common phrases one will hear while talking with rural women is "I'm just a rural woman."⁷⁷ This phrase is often followed by, "What can I do?" The lack of educational opportunities often leads these women to see themselves as being powerless and unable to contribute significantly to the development of their families or communities.⁷⁸ They see themselves as dependent on assistance from others, whether from better-educated and more authoritative relatives, or from outside experts. In many cases, this view is reinforced by societal norms and customs.⁷⁹ One important part of empowering women is enabling them to recognize their own decision-making capacity and the role that they can play in bettering the lives of their families and others around them.

An underlying premise of the Environmental Action Program is that all human beings, regardless of background or education level, have the ability to contribute to the well-being of others and to generate knowledge to help their families and communities advance.⁸⁰ The EAP recognizes that the generation and application of knowledge are fundamental to the development process.⁸¹ While advances in science and technology generated outside a region can be a source of advancement and prosperity, sustained development at the community level occurs when the local population actively works together to address the challenges it faces. Through the training program, participants in the EAP come to see themselves as active participants in the progress of their communities, generators of knowledge, builders of unity, and contributors to sustainable development.⁸²

76. Miao Jun Ying, EAP participant from Hebei Province, Wuba Country.

77. This was a phrase repeated often in the authors' conversations with the women in their trainings. See, e.g., Caroline Wang, Mary Ann Burris, & Xiang Yue Ping, *Chinese Village Women as Visual Anthropologists: A Participatory Approach to Reaching Policymakers*, 42 SOC. SCI & MED. 1391, 1391 (1996), available at: http://remap.ucla.edu/jburke/misc/urban/wang96_photovoice.pdf (describing rural women as often "neither seen nor heard").

78. See RAHMAN, *supra* note 48, at 6, 62.

79. *Id.* at 6.

80. See *China Programs Annual Report 2009*, *supra* note 55.

81. *Id.*

82. *Id.*

This shift from women as passive recipients of outside benefits to active contributors to their own development, is a major one for most participants in the program. The example of the bridge built by women in Sai Diao illustrates this dynamic change in the group mindset of the participating women.⁸³ The location of their fields in relation to the village and the river was certainly not a new problem. However, it was one that caused many hours of extra walking over the course of a season of farming, a substantial burden on their lives. The technology needed to build the bridge was neither complicated nor outside the reach of the community's skills. But the women of the community were in the habit of believing that the solutions and resources needed to better their lives had to come from others, and they lacked confidence in the importance of their own needs. This allowed the problem to linger for years. However, once the women saw themselves as protagonists in their own development, they did not hesitate to organize themselves and community members, both men and women, to address the problem.⁸⁴

Because the focus of the EAP is on learning and generating knowledge, problems that arise are seen as opportunities for learning rather than evidence of failure or lack of capacity. The training program itself is also largely based on group consultation about various exercises, many of which can have multiple responses.⁸⁵ These exercises also help participants get used to contributing their ideas in a safe setting, and this helps to raise their willingness to participate actively in decision making after the training. As a result, women find greater courage to take on new activities and to contribute their ideas to consultation. The experience of Hei Cai Ping from Ding Bian County in Shaanxi Province illustrates the change:

Before my personality was very introverted, I didn't even know how to talk with my husband and children. When I saw my sister and other women participating in the Environmental Action Program, and saw the light, the happiness they had, I decided to study as well. I feel I became confident. Before, I really didn't dare talk to people, but now I am courageous. After the training, I began to think, women can do things well, too. I didn't have much capital, but I started a small shop to sell breakfast in my neighborhood. The business is pretty good now. Before I thought that our family not being well off was my husband's fault for not making much money, but after the training I realized that I could

83. Badi Foundation, 2010 Internal Report, *supra* note 56.

84. *Id.*

85. Badi Foundation EAP Training Materials (on file with author L. Noguchi).

make money too, and started to make use of my own portion of ability, working together toward prosperity.⁸⁶

Tian Hong Yan, another participant from Ding Bian had this to say:

Before I was just a very, very typical, rural woman, but after participating in the project, I felt I was a useful person. Not only did I realize my own value, I could also contribute something to society. I established my own small organization, maybe someone from outside would think these are empty things, but speaking from my heart, I think this work is very fulfilling, it's great even if it is still rather small. But I feel so fortunate. I feel I am noble, and have a purpose to my life and know what I want to do.⁸⁷

C. FOSTERING COLLABORATION WITH COMMUNITY PEERS

A second aspect of the Environmental Action Program that encourages participation in decision making is the targeted training in collaboration and leadership.⁸⁸ Collaboration is defined as the action of working together with others to produce something.⁸⁹ It can also be defined as working together for a common goal, a process that is fundamental to social change. In the EAP training, participants examine various common models of human relationships and their impact on participation, collaboration, and capacity building.⁹⁰ They also look at principles of consultation and examine the language of consultation to identify ways of expressing ideas that contribute to greater awareness, unity, harmony, and justice.⁹¹ For

86. Badi Foundation Internal Report, Sharing of Learning Project Report (Zhou Peng trans. Nov. 23, 2010) (on file with author L. Noguchi).

87. *Id.*

88. See *China Programs Annual Report 2009*, *supra* note 55. Meaningful local participation in the conceptualization, design, implementation and evaluation of the policies and programs that affect local populations is associated with long term sustainable development. Recent research has found that such systems “maximize[e] the opportunity for effective . . . management and the successful creation, implementation, and management of organizational change.” Stephanie Carter *The Importance of Party Buy-In in Designing Organizational Conflict Management Systems*, 17 *MEDIATION Q.* 61 (1999).

89. 3 *OXFORD ENGLISH DICTIONARY* 469 (2d ed. 1989).

90. See Badi Foundation EAP Training Materials, *supra* note 52.

91. *Id.* The skill of consultation is indispensable to grassroots decision making. With this capability, all segments of the community are prepared to “arrive at the truth of a given matter,” and are enabled to “manage change,” “draw on the strength of the group,” “foster unity of purpose and action,” and “increase their capacities and sense of worth.” See BAHÁ’Í INTERNATIONAL COMMUNITY, *Valuing Spirituality in Development*, <http://statements.bahai.org/98-0218.htm> (Feb. 18–19, 1998). Consultation may be described as a method of truth seeking that is based on the principle of unity:

Consultation bestows greater awareness and transmutes conjecture into certitude. It is a shining light which, in a dark world, leads the way and guides. For everything there is and will continue to be a station of perfection and maturity. The maturity of the gift of understanding is made manifest through consultation.

example, consultation is defined as a search for truth in which different individuals may be able to offer different insights or understanding of the elements of a particular situation.⁹² Consultation sits in contrast with debate, argument, manipulation, or efforts to convince others of one's own opinion. Participants examine how to use their language to encourage others to look to the overall reality of a situation, and to convince others of their own views. They practice using language that is inclusive, is neutral, and treats contributions to the discussion as belonging to the group rather than the individual who contributed the idea (saying, for example, "I think the idea of building the bridge near Ma Qun's house would be useful to more people" rather than "I think Zhang San's idea on where to build the bridge is the best.").⁹³ They also act out examples of common decision-making scenarios and think about how they can respond if their or someone else's idea is belittled.⁹⁴ By changing the way the women speak to one another and think about their problems, they learn to better achieve cohesion while still facilitating problem-solving.

The course on the power of collaboration aims to better the lives of participants' families and communities, and encourages participants to work together on real-life projects.⁹⁵ Although participation in the course itself does not directly translate into individual participation in community-level decision making, the fact that participants go on to initiate local projects suggests that the course helps them play a greater role in decision making and planning in their families and communities. In the bridge-building example from Sai Diao, the mobilization of community members to address a long-standing transportation problem, and the promotion of an improved biogas generation system among village families both indicate a level of involvement in community planning and decision making that was new for that group of women. The changes in both the biogas generation system and the resulting changes in their farming practices speak to the impact that scientific knowledge can have on decision making.

The types of projects carried out by participants in EAP vary considerably. They range from introducing new economic crops to organizing women's participation in community events; from planting trees to prevent soil erosion to promoting and implementing sustainable technologies such as the "four-in-one" biogas generator and greenhouse system; they even extend to organizing a choir to enrich village culture.⁹⁶ What is consistent, however, is that the participants themselves are analyzing the needs of their families and communities in order to draw on

92. Badi Foundation EAP Training Materials, *supra* note 52.

93. *Id.*

94. *Id.*

95. *China Programs Annual Report 2009*, *supra* note 55.

96. Badi Foundation, 2010 Internal Report, *supra* note 56.

their own resources and skills, and then working together to address those needs.

D. BUILDING WOMEN'S CAPACITY TO APPLY SCIENTIFIC KNOWLEDGE

It is not uncommon for programs that seek to enhance participation in sustainable development to provide information and ready-made technical solutions to common challenges.⁹⁷ Programs that focus on information primarily see women's lack of knowledge about the environment and sustainability as a barrier to greater participation in decision making about sustainable development. Those programs are often not primarily concerned with decision making per se but are more concerned with changing specific behaviors, such as planting trees, recycling, or using green products. While access to information is important, for women to participate fully and effectively in decision making it is vital for them to have access to a full range of scientific knowledge, in addition to being adequately skilled in consultation. This approach recognizes that the relevant science can inform their decisions, and that the women possess the tools necessary to independently evaluate the different options before them.

The EAP builds the intellectual capacity of rural women by introducing them to scientific principles related to sustainable development, such as the theories of ecological balance and resource cycling. They are also taught the value of the scientific method, such as the importance of observation and experimentation.⁹⁸ Scientific content is made accessible and relevant by having participants use the principles to analyze their own farming practices, or to compare various possible solutions to common problems they face, with the goal of contributing to sustainable development. As participants become familiar with the science of sustainability and with technical vocabulary, existing resources also become more accessible. For example, throughout rural China there are government-run agricultural extension stations with the mission of promoting and sharing improved agricultural practices or technology generated from research projects at universities and other centers of research.⁹⁹ These extension stations sometimes have demonstration plots to show farmers how to use new technologies, and they are a source of information and guidance for farmers who want to try and implement these new practices.¹⁰⁰ They periodically offer technical training as well. Many participants in EAP expressed that, prior to attending the EAP training, they were afraid to approach extension agents or to contact village leaders and experienced farmers. After the

97. Sheila Foster, *Environmental Justice in an Era of Devolved Collaboration*, 26 HARV. ENVTL. L. REV. 459, 483–84 (2002).

98. Badi Foundation EAP Training Materials, *supra* note 52.

99. See Qijie Gao Qijie & Chuanhuong Zhang Quanhong, *Agricultural Technology Extension System in China: Current Situation and Reform Direction*, 2 MGMT. SCI. & ENGINEERING Dec. 2008, at 47, 48 <http://cscanada.net/index.php/mse/article/viewFile/979/1038>.

100. *Id.*

training, the women noted they were more confident, and better able to reach out to these contacts.¹⁰¹ Because they now understood the science behind the agricultural production systems, they were also more likely to innovate and adapt new production systems, start small business, or assist government-sponsored environmental projects.¹⁰² They were likewise better able to explain the value of sustainable production systems to others in their villages, and have proven to be instrumental in assisting government agencies in the promotion of sustainable technologies.¹⁰³

This change in the women, from passive recipients of benefits to active participants in decisions about the development of their families and communities, is a distinctive result of the EAP program. The example from Sai Diao village, in which participants modified biogas systems and cropping systems based on their new understanding of principles of sustainable agriculture, though small in scale, shows how understanding of the science behind different technologies enables EAP participants to evaluate technological choices and take on leadership roles in their communities. The story of Cao Guimei from Taiping village, Ding Xi City, Gansu Province, shows the impact the change can have on one individual and her family:

After the training I felt that my mindset had changed a lot. Unlike before, I dared not say what I thought, and I dared not to do what I thought of doing, always thinking that I was useless. But about 10 days after I returned home, I boldly selected a project more suited to the natural environment of our village, namely large scale chicken farming. First of all I had to win over my family members and friends. I tried to use what I had learned in the course about mature human relationships, consultation, and cooperation skills in order to introduce my proposal to my family members. Although our family agreed, I did not know where to find the necessary finances. This time I did not hesitate and decided that I must make it. So I looked for my friend with which to consult and cooperate in getting a loan with the help of my relatives. At the same time, I sought the help and guidance of experts in chicken farming . . . Now I have built and established a chicken farm.¹⁰⁴

Women's increased understanding of science and their newfound confidence to take on new projects benefit the communities directly, because residents are able to innovate and create better methods to improve and advance their community in sustainable, healthy ways.

101. Badi Foundation, 2010 Internal Report, *supra* note 56.

102. *Id.*

103. *Id.*

104. Badi Foundation Report 2004 (data on file with author L. Noguchi).

IV. CONCLUSION AND RECOMMENDATIONS

By now it is clear that to secure the success of sustainable development in rural areas, the participation of local communities, and especially that of the women within those communities, is absolutely essential. Women's participation in decision making regarding sustainable development is a widely accepted goal, one made explicit as early as 1992 by the World Commission on Environment and Development.¹⁰⁵ The challenge is how participation can be brought about more effectively, given the lack of systematic attention paid to promoting genuine participation. The experiences of the Badi Foundation in working with almost 4000 women in China lend insights into some factors that may help catalyze more effective participation of women in decision making related to sustainable development. Three approaches in particular—empowerment through recognition of the value of one's own contributions; development of skills of collaboration and consultation; and enhancement of the participants' understanding of science—effectively facilitate women's participation in decision making both within their families and in the broader community.

Some systemic approaches need to be solidified in order to truly help rural women recognize their own capacities to make important decisions and effect change within their communities. Further, more systematic and extensive documentation of the results of the EAP program and analysis of its content are needed. However, preliminary analysis shows that by empowering women, improving their ability to collaborate, and educating them about science, the goal of enhancing women's participation in decision making is within sight.

105. World Comm'n on Env't & Dev., *Agenda 21*, A/CONF.151/26; Vol. I, Ch. 24 (June 1992), available at <http://www.un-documents.net/a21-24.htm>.
