

Project Completion Report Format



SECTION 1: BACKGROUND INFORMATION

1. Name & contact point of grantee organisation			
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2. Reference number and title of project Enter the reference number and project title as it appears in the Letter of Understanding.

The Western China Agro-Ecological Village (WCAEV) Development Project; Project # 20649

3. Location of project State the country & province or region where the project is being implemented.

Dingxi County, Gansu Province and Zhunger County, Inner Mongolia Autonomous Region,
The People's of Republic China

4. Reporting period Enter the dates in dd/mm/yyyy format (eg. 01/05/2001)

From month/year	December 20, 2004	To month/year – end of project date from LOU	June 15, 2005
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5. Project summary details

Planned start date	June 15 th , 2002	Total Shell Foundation grant amount awarded	\$303,000
Actual start date	June 15 th , 2002	Disbursed to grantee to date	\$303,000
Planned end date	June 1 st , 2005	Expenditure incurred by project	\$303,001
Actual end date	June 1 st , 2005	Balance in-hand	\$0
Total Project budget	\$939,000	Additional funding secured to date	\$558,649

6. What were your greatest achievements?

Summarise your main achievements (both expected & unexpected) over the life of the project.
How have these achievements contributed to the purpose and goal of the project?

1. The farmer trainers and Project Management Team (PMT) have proven that the Agro-Ecological Village is a very successful way to support sustainable development in rural communities in China. This model assists in providing immediate benefits to the farmers through improved crop and fodder plant materials and management techniques (including compost making and crop residue incorporation into the soil), while at the same time impacting long-term development by assisting with farm planning and improving the farmers capacity to understand and develop sustainable farming systems. It was found that the project had unprecedented impacts on developing local community networks. The farmer trainings and learning farm activities have greatly improved local communication and sense of community, along with sharing and information exchange between local farmers. The focus on practical on-farm development led by community farmers and the establishment of local farmers associations will ensure long-term effects in the outreach and sustainability of the project.

2. The 2005 administration of the socio-economic survey found that both communities showed dramatic developments in increased financial independence, food and income security and subsequent higher quality of life during the three-year project. A major increase in income was observed in both communities during the survey period, with a 44% increase in mean household income between 2003 and 2005 in Dingxi and a 60% increase in mean household income in Zhunger between 2003 and 2005, both of these values statistically significant. In Dingxi, total revenue from farm-based sources (crops, livestock and forestry) increased by 64% while total revenue from outside sources (labour, business) increased by 3%. In Zhunger, farming income increased by 68% while outside income sources increased by 35%, indicating that investing in farm improvement was an important factor in increasing income through farm planning, farm management, improved varieties (crops, livestock and forages) and ecological soil fertility improvement. Farmers' total equity also increased as livestock holdings were enlarged. This dramatic increase in farm revenues while outside income remained constant is very positive because it indicates an increased economic value of farming and probably not due to outside economic factors such as inflation. It is apparent from the findings of this study that the overall financial situation of the households surveyed was greatly improved by 2005. The yearly household savings increased dramatically and the number of households with a yearly deficit passed from 50% in 2003 to zero in 2005 in Dingxi, and decreased from 457% to 15% in Zhunger. These findings indicate a much higher degree of financial stability than was previously present in the communities with strong indications that households had moved beyond simply meeting their basic needs. Perceptions of overall quality of life and satisfaction in farming sustainability and in the environment/surroundings greatly increased during the survey period in Zhunger and in both communities respondents reported their increasing adoption of sustainable agricultural techniques including compost making, crop rotation, crop residue incorporation into the soil and reduced fertilizer and pesticide/fungicide/insecticide use. According to the socio-economic survey, 95% of interviewees were highly satisfied with the project.

3. During the lifetime of the project in Dingxi, 3386 individual training days were conducted (including 1696 training days of women) on subjects including: Composting, Livestock Feeding and Disease Management, Silage Preparation, Farm Planning, Soil Fertility, Weed Control, Cash Crop Farming, Horticulture etc. Of the 325 households in the village, farmers from 314 households (97%) received at least once training. In Zhunger, 1200 individual training days were conducted over the lifetime of the project (including 300 training days of women) on the topics listed above. Of the 165 households in the village, farmers from 112 households (68%) received at least one training. In addition to the trainings, farmers and farmer trainers also received copies of the Ecological Farming Training Modules, books and supplementary reading materials, technical exposures and cross-site visits, which were all successful in increasing their capacity to absorb and employ improved farm management techniques. In total, the project conducted 4586 individual training days in the two communities, with participation of women at 44% and succeeded in reaching the majority of community members.

4. The farm planning component of the project was successfully completed with a farm planning training module developed and translated into Chinese through the joint effort of REAP and CACSD. In Dingxi, 211 farm plans were drafted and renewed by farmers with assistance of trainers and in Zhunger 116 basic farm plans were drafted and renewed by farmers with assistance of trainers for a total of 327 sustainable farm plans developed during the project. The 2005 socio-economic survey reported that 64.9% of Dingxi farming households and 62% of Zhunger farming households renewed their farm plans for the coming year indicating that they had positive results from the initial farm plans.

5. During the on-farm trials in Dingxi, 103 varieties of crops, forages and vegetables were distributed in the 12 village groups, with potatoes, peas, lentils, flax, wheat, alfalfa and millet achieving excellent results. In Dingxi, a total of 90,000 improved seabuckthorn seedlings for erosion control were also distributed, along with an improved variety of sheep for cross breeding. In Zhunger, 56 varieties of crops, forages and vegetables were distributed along with 6 forage processing machines. Grains, potatoes and alfalfa were particularly successful in Zhunger. Livestock improvement was also very successful in Zhunger with several varieties of sheep and cashmere goats purchased for cross breeding, resulting in 343 offspring produced (132 male and 211 female) during the first breeding season. The project was highly appreciated by local farmers, technicians and governors for its participatory training, evaluation and extension approach.

6. Throughout the project, women in the communities were actively involved in all activities. In Dingxi, 50% of participants in the farmer trainings were female while 3 women (out of 8 people) were selected as

7. What would you have done differently? *Given all that you have learned through implementing your project, what would you have done differently with hindsight? In particular, is there anything you would have done to make your project most cost-effective?*

The crop variety trials for ecological farming have been one of the activities generating the most local interest in the project. However, extension of the varieties in year two of the project was mostly localized in the immediate area due to a lack of sufficient community organization. It was recognized that with the successful adaptation of new varieties, a community policy needed to be created for the equitable distribution of the successful varieties to be scaled up to avoid a rift in the community if some farmers were perceived as benefiting more than others. This was particularly noted during the farmer trainers assessment workshop held in Dingxi, 2003, when the farmer trainers reported that a handful of isolated individual community members were reluctant to partake in the project, questioning the benefits that the village as a whole would receive from the project.

The creation of the Local Dingxi Agricultural Technical Association and the Zhunger Growers Association addressed many of these problems by developing effective seed, plant and livestock material distribution methods and regulations. Members are selected to manage the learning farms and test small amounts of new varieties, then when proven successful, distribute seed materials to others and try new varieties themselves. The establishment of community associations should be a priority in any rural community development initiative in China. This could have been done earlier in the WCAEV project to ensure more benefits were received by the community at an earlier date and new materials were introduced as soon as possible, however, this was not possible due to the social structure existing in the communities at the beginning of project implementation. The community associations in Dingxi and Zhunger have since proven extremely successful and will continue the training, information exchange and extension and management of crop, vegetable and fodder varieties to utilize the results of the project on a long-term basis after the project phases out.

The project was highly appreciated by local farmers, technicians and government officials for its participatory training, evaluation and extension approach, and its impact in the local communities and extension into outlying areas. Over the lifetime of the project farmers from 97% of households in Dingxi and 68% of households in Zhunger received at least one training. In Dingxi, almost 100 farmers from areas outside project implementation visited the variety test fields on the learning farms and in Zhunger 200 outside farmers visited the sites. Some crop varieties introduced during the project (e.g. Zhenye Pea, Beihaidao Buckwheat, Longmi millet) were re-produced and have already been extended beyond the project area.

The Agro-Ecological village is an extremely efficient cost-effective model. Encouraging the efforts of farmers to work together to address local problems is critical for effective and low cost rural development. The groups link farmers in different communities in obtaining information on farming techniques and the latest agricultural trends, sharing equipment or post-harvest facilities and providing support and learning. They also facilitate cooperation with local government units, and support marketing efforts through the creation of farmer co-operatives. The WCAEV project also utilizes 'farmer-to-farmer' training, a well-proven peer education training system utilized by farmer alliances in Canada, Africa and Asia. It is evident that with millions of rural peasants in China, conventional training approaches using existing government extension positions will not adequately meet the enormous training needs of farmers in the nation. The cost of a single government extension officer in China is approximately equal to hiring 4 half-time farmer trainers, who are likely to be more effective and achieve a much greater developmental impact over the long term in the communities. If farmers trainers can be used as general extensionists, they can reduce costs by 50% and if used as technical trainers they can reduce costs by up to 75-85%, not considering transport costs. Farmer-to-farmer training is a core component of the WCAEV project. It is an approach that can help enable large numbers of farmers to have access to training using this effective and low cost learning method.

SECTION 2: 8. ACHIEVEMENTS TOWARDS PROJECT PURPOSE

OVERALL PROJECT RATING: (as judged through self-assessment)				
<p>PROGRAMME GOAL: To mitigate poverty and increase the self-reliance of marginalized Chinese farmers living in environmentally sensitive areas, while reclaiming degraded environments.</p>	<p>OVI: Increased income and employment Improved environmental conditions.</p>	<p>Extent to which project achieves programme goals</p> <p>Income Local information for both beneficiary communities was collected and analyzed in 2003, 2004 and 2005 through the administration of a socio-economic survey to representative rural households. The survey found a major increase in income in both communities during the period surveyed, with a 44% increase in mean household income between 2003 and 2005 in Dingxi and a 60% increase in mean household income in Zhunger between 2003 and 2005, both of these values statistically significant. In Dingxi, total revenue from farm-based sources (crops, livestock and forestry) increased by 64% while total revenue from outside sources (labour, business) increased by 3%. In particular, farm income was impacted by greater yields with grain production increasing from 356kg to 480kg per capita. During the project period, household expenditures also decreased slightly. As a result, yearly household savings increased dramatically and the number of households with a yearly deficit passed from 50% in Dingxi in 2003 to zero in 2005. The elimination of deficits from household accounts in 2005 is probably linked to an observed increase in debt repayment which leads to a reduction in debt load and greater autonomy.</p> <p>In Zhunger, income increased by 60%; the majority of income was from on-farm activities. Farming income increased by 68% while outside income sources increased by 35%. The farmers' total equity increased as well as livestock holdings were enlarged. The number of households running a negative financial balance decreased from 45% over the three-year survey period to 15% in 2005, leading to greater financial security for household expenditures. In particular, farm income was impacted by greater yields with grain production increasing from 300kg to 500kg per capita. Debt repayment was the category of household expenditure that increased the most.</p> <p>Employment Local information for both beneficiary communities was collected and analyzed in 2003, 2004 and 2005 through the administration of a socio-economic survey. In Dingxi, large increases were noted in the percentage of income generated from livestock (21% in 2003 up to 36% in 2005) and forestry (12% in 2003 up to 21% in 2005) with crop farming income remaining constant (54% in 2003, 53% in 2005). A 4% increase in labour</p>	<p>Recommendation/actions :</p> <p>Income In Dingxi, the dramatic increase in farm revenue compared with outside income is very positive because it indicates an increased economic value of farming probably not due to outside economic factors such as inflation. It is apparent from the findings of this study that the overall financial situation of the households surveyed was greatly improved by 2005. Additionally, the increase in household savings and elimination of deficit indicates a much higher degree of financial stability than was previously present in the community.</p> <p>Zhunger showed dramatic development in increased financial independence, food and income security, and subsequent higher quality of life during the three-year project. The high increase in farming income relative to outside income sources indicated that more livelihood was invested in the farm rather than in out-migration to labour. The high debt repayment is also a strong indicator that households had moved beyond simply meeting their basic needs. Transformation to stored-livestock feed production systems was well developed by project completion. Farmers learned to produce livestock using stored feed systems (in particular corn silage, improved alfalfa and high yielding warm season grasses) which allowed them to increase their farms carrying capacity and improve household income while conforming to governmental grazing restrictions.</p> <p>Investing in farm improvement was an important factor in increasing income through farm planning, farm management, improved varieties (crops, livestock and forages) and ecological soil fertility</p>	<p>Rating: Green</p>

	<p>employment was cited between 2003 and 2005. Overall, employment in two of the largest categories (livestock and labour) increased.</p> <p>Employment from livestock in Zhunger increased from 46% to 51% between 2003 and 2005. Employment from crop farming increased from 37% to 45% and employment from labour increased from 9% to 21% in this same time period. Overall, employment in the three largest categories increased (livestock, crop farming and labour).</p> <p>Environmental conditions</p> <p>The project was highly successful in protecting the watershed from soil erosion. In Dingxi, project activities completed 587.3 ha of re-vegetation, 169 check dams, 352 water cellars, 101.1 ha of terrace and 25.7 km of country road construction with 7.78 km of soil erosion control. On farm trials included 103 varieties of crops, forages and vegetables purchased and distributed among 58 farming households for trials in the 12 village groups. In Dingxi a total of 90,000 improved seabuckthorn seedlings for erosion control were distributed along with an improved variety of sheep for cross breeding. According to the final evaluation by Chinese Ministry of Water Resources, the soil erosion rate was reduced by 35% during the lifetime of the project.</p> <p>In Zhunger, project activities completed 705.2 ha of seabuckthorn re-vegetation, 317 ha of grass, 2 check dams 2 irrigation wells and 5 km of road. A total of 56 varieties of crops, forages and vegetables were purchased and distributed in 35 households as well as 6 machines for forage processing demonstration in the local communities. Additionally, 28 silos for silage were set up for demonstration and training in Zhunger. Livestock improvement was also very successful in Zhunger with several varieties of sheep and cashmere goats purchased for cross breeding, resulting in 343 offspring produced during the first breeding season. According to the final evaluation by Chinese Ministry of Water Resources, the soil erosion rate was reduced by 65% during the lifetime of the project.</p> <p>Additionally, project activities assisted local farming in adapting to difficult local environmental conditions (including drought and soil erosion) and new governmental restrictions regarding farming and grazing on sensitive lands. Efforts were made to mitigate drought through introduction of drought-resistant plant species and varieties of crops (eg chickpeas, field beans and semi-leafless peas), vegetables, fodder (warm season grasses) and trees and more water efficient farming practices. Water collection tanks are now being used to provide irrigation water for expanding vegetable production. Through the ecological agriculture trainings, farmers are also learning through training how to rotate high and low water-using crops to prevent exhaustion of soil</p>	<p>improvement.</p> <p>Employment</p> <p>Overall, employment in some of the largest categories increased (livestock and labour in Dingxi, livestock, crop farming and labour in Zhunger). This stability and increase in local employment shows strengthening of the local economies and their ability to remain self-sufficient. Future projects should invest in increasing rural income sources. In the WCAEV project, investing in farm improvement was an important factor in increasing income through farm planning, farm management, improved varieties (crops, livestock and forages) and ecological soil fertility improvement.</p> <p>Environmental conditions</p> <p>Project activities including re-vegetation and the construction of check dams, water cellars, terrace and roads have had a tremendous effect on the local environment, reducing soil erosion levels by 35% in Dingxi and 65% in Zhunger over the lifetime of the project.</p> <p>Additionally, project initiatives in farm development in both communities resulted in an increased diversity of crops and crop rotations, increased vegetation coverage, implementation of sustainable conservation measures, introduction of improved performance fodder crops and enhanced farm water management. It also increased controlled grazing, reduced tillage, reduced grass burning and increased composting of agricultural residues and increased livestock and livestock manure for compost. The transformation to stored-livestock feed production systems was also well developed by project completion. Farmers learned to produce livestock on stored feed systems (in particular corn silage, improved alfalfa and high yielding warm season grasses) which allowed them to increase their farms carrying capacity and improve household income while conforming to</p>	
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		water for crop production.	governmental grazing restrictions. Future rural development initiatives in China should continue to include effective erosion control measures and sustainable livestock and agricultural practices such as these.	
<p>PROJECT GOAL: To mitigate poverty and empower marginalized Chinese farmers living in environmentally sensitive areas.</p>	<p>OVI: Increased employment Increased net income Reduced outward migration</p>	<p>Progress:</p> <p>Employment In Dingxi, large increases were noted in the percentage of income generated from livestock (21% in 2003 up to 36% in 2005) and forestry (12% in 2003 up to 21% in 2005) with crop farming income remaining constant (54% in 2003, 53% in 2005). A 4% increase in labour employment was cited between 2003 and 2005. Overall, employment in two of the largest categories increased (livestock and labour).</p> <p>Employment from livestock in Zhunger increased from 46% to 51% between 2003 and 2005. Employment from crop farming increased from 37% to 45% and employment from labour increased from 9% to 21% in this same time period. Overall, employment in the three largest categories increased over the survey period (livestock, crop farming and labour).</p> <p>Net Income Net income was calculated as the total yearly family income minus the total yearly family expenditures. In Dingxi, net income increased from 273Y to 4326Y over the period of the project, a 1485% increase. In Zhunger, net income increased from -1267 to 2472Y over the period of the project, a 900% increase.</p> <p>Furthermore, the yearly household savings increased dramatically and the number of households with a yearly deficit passed from 50% in 2003 to zero in 2005 in Dingxi and decreased from 45% to 15% in 2005 in Zhunger. In Dingxi the average household savings in 2005 was 4326Y/year, considerably up from 2004 where the average amount of money saved per household surveyed was 796 Y/year and from 2003, where the average amount of money saved per household surveyed was 273Y/year. In Zhunger in 2005, the average amount of money saved per household surveyed was 2507 Y/year. This was considerably higher than the 2004 values of 1139,5 Y/year and 2003 values of -1267,25 Y/year.</p> <p>Reduced outward migration Local information for both beneficiary communities was collected and analyzed in 2003, 2004 and 2005 through the administration of a socio-economic survey to representative rural households. In Dingxi and Zhunger,</p>	<p>Recommendation/actions :</p> <p>Employment Overall, employment in some of the largest categories increased (livestock and labour in Dingxi, livestock, crop farming and labour in Zhunger). This stability and increase in local employment shows strengthening of the local economies and their ability to remain self-sufficient.</p> <p>Net income Both Dingxi and Zhunger showed dramatic development in increased financial independence, food and income security, and subsequent higher quality of life during the three-year project. Higher farm incomes from improved farm management combined with stable household expenditures, greater food self-sufficiency and decreased need of farming inputs led to higher net farm income. This illustrates the benefits of investing in the agricultural capacity of rural farmers as a means to drive rural development and promote local self-sufficiency.</p> <p>Reduced outward migration In both communities, income generated from agriculture remained stable on local farms. In Dingxi, the increase in on-farm income generated from business and “other” is a positive trend illustrating that participants have initialized some new local income generating activities. In Zhunger there also appears to be an improvement in on-farm generated income due to labour opportunities in a neighbouring village rather than at a more distant location as was in the past. Investing in farm improvement is an important factor in increasing income through farm planning, farm management,</p>	<p>Rating: Green</p>

		<p>income from agriculture was found to be generated exclusively on the participants' own farms throughout the survey. In Dingxi, income generated in the "business" and "other" categories was found to move closer to the farmer's residences between 2003-2005 while forestry was found to move farther away. In Zhunger in 2003, all labour income was generated in an outside location whereas in both 2004 and 2005 there was a slight decrease in this value due to the fact that some of the respondents had found labour employment in a neighbouring village.</p> <p>The survey findings of greatly improved income generation, particularly on-farm income, improved household savings, improved access to local employment coupled with increased local capacity for environmental protection and an improved perception of quality of life indicate an improvement in the economic and social opportunities present in the villages.</p>	<p>improved varieties and ecological soil fertility improvement. The surveys results indicate that the projects focus on education, capacity building and the formation of local farmers associations has resulted in greater empowerment of residents with respect to developing new means of income through business on their own farms. Future projects in rural areas should continue to focus on capacity building around sustainable agriculture as a basis for rural development, this project has shown to directly increase local agricultural income generating capacity and reduce the economic draw of larger cities.</p>	
<p>PROJECT PURPOSE: The project will assist marginalized communities to increase their self reliance and improve their economic and social well being while protecting and enhancing the natural resource base.</p>	<p>OVI: Adoption of ecological farming measures including contouring and diversified production by March 2005</p>	<p>Progress:</p> <p>Ecological Farming Local information for both beneficiary communities was collected and analyzed in 2003, 2004 and 2005 through the administration of a socio-economic survey to representative rural households. Between 2003 and 2005 in Dingxi, there was a large reduction (20% or more) in agricultural inputs and greater increase in households using the following techniques: reduced herbicide, reduced insecticide, reduced fungicide and reduced chemical fertilizer. There was also a large increase in household using techniques that promote improved soil nutrients and organic matter including: reduced livestock grazing, reduced tillage, composting crop residues and green manure/cover cropping. There was also a large increase in the number of households using a higher number of crop varieties and a 42% increase in the number of households using check dams. Farmers practicing contour farming, an effective system of erosion control, also slightly increased. There was a 37% increase in the number of farmers that reduced their tillage for a total of 74 % using this practice in 2005.</p> <p>Although in 2003 a small number of farmers were already utilizing some sustainable practices, by 2005 in Zhunger, all households were found to employ the practices of improved crop rotation, reduced livestock grazing, reduced fertilizer and planting trees on sloped lands. The percentage of farmers making use of sustainable agricultural practices increased from 2003</p>	<p>Recommendation/actions:</p> <p>Ecological Farming Techniques such as composting, silage for livestock and the incorporation of crop stalks into the soil to increase soil carbon, have been adopted and embraced by members of the communities in both regions. In particular, farmers reported that the most important project activities around capacity building were farm planning and adaptability trials, organic fertilizer production, increased weed control and drought control through crop management and new varieties. The PMT and farmer trainers realized that the trainings on simple, practical techniques such as composing, livestock silage and crop residue management that can directly impact yield are most appreciated by the farmers. Farmer trainers are also learning to appreciate the theory behind the trainings and as they gain competency in delivering trainings, and are more able to effectively transfer these concepts to the farmers in the community. Future projects should continue to focus on practical technical interventions while building up the capacity of</p>	<p>Rating¹: Green</p>

¹Use the following colour scheme for self-assessment

Green = Project either fully or partially achieved its intended purpose, but delivered ALL expected outputs

Amber= Project purpose not yet achieved, but some (the most significant) outputs delivered

Red = Project purpose unlikely to be achieved, and none or a few of the less significant outputs delivered

		to 2005, with the largest increases occurring in reduced fertilizer, improved seed quality, increased crop diversity, increased crop varieties, planting trees on sloped lands, leaving residues on field, and reduced tillage. The most dramatic increases occurred in the reduced tillage and leaving residues on field, practices which were used by only 5% of the farmers in 2003 and by 85% and 90% respectively in 2005, indicating a community-wide transition to these ecological farming measures that help mitigate erosion and increase soil organic matter.	local farmers to be able to understand more complex systems of sustainable farm management.																																																																																																																									
PROJECT OUTPUTS:	OVI:	Progress:	Recommendation/actions:																																																																																																																									
Output 1 * Increased capacity of farmers and their organizations.	900 trainees by March, 2005 300 farm plans developed by March, 2003	<p>Farmer Trainings</p> <table border="1"> <thead> <tr> <th colspan="8">Summary of WCAEV Trainings Delivered to Farmers under Farmer to Farmer Trainings from 2002-2005</th> </tr> <tr> <th>Community</th> <th colspan="3">Dingxi</th> <th colspan="3">Zhunger</th> <th>Total</th> </tr> <tr> <th>Subject of Training</th> <th>Male</th> <th>Female</th> <th>Total</th> <th>Male</th> <th>Female</th> <th>Total</th> <th></th> </tr> </thead> <tbody> <tr> <td>Eco farming introduction</td> <td>225</td> <td>214</td> <td>439</td> <td>131</td> <td>40</td> <td>171</td> <td>610</td> </tr> <tr> <td>Soil fertility</td> <td>225</td> <td>208</td> <td>433</td> <td>74</td> <td>22</td> <td>96</td> <td>529</td> </tr> <tr> <td>Cropping systems</td> <td>237</td> <td>275</td> <td>512</td> <td>99</td> <td>31</td> <td>130</td> <td>642</td> </tr> <tr> <td>Weed control</td> <td>156</td> <td>244</td> <td>400</td> <td>69</td> <td>21</td> <td>90</td> <td>490</td> </tr> <tr> <td>Disease control</td> <td>157</td> <td>203</td> <td>360</td> <td>119</td> <td>38</td> <td>157</td> <td>517</td> </tr> <tr> <td>Soil conservation</td> <td>290</td> <td>292</td> <td>582</td> <td>125</td> <td>42</td> <td>167</td> <td>749</td> </tr> <tr> <td>Livestock feeding/forage</td> <td>210</td> <td>162</td> <td>372</td> <td>163</td> <td>73</td> <td>236</td> <td>608</td> </tr> <tr> <td>Fruit production</td> <td>9</td> <td>7</td> <td>16</td> <td>20</td> <td>7</td> <td>27</td> <td>43</td> </tr> <tr> <td>Farm planning</td> <td>181</td> <td>91</td> <td>272</td> <td>100</td> <td>26</td> <td>126</td> <td>398</td> </tr> <tr> <td>Sub-Total</td> <td>1690 (49.9%)</td> <td>1696 (50.1%)</td> <td>3386</td> <td>900 (75%)</td> <td>300 (25%)</td> <td>1200</td> <td>4586</td> </tr> <tr> <td>PROJECT TOTAL</td> <td>Male</td> <td>2590</td> <td>(56%)</td> <td colspan="2">Total</td> <td>4586</td> <td></td> </tr> <tr> <td></td> <td>Female</td> <td>1996</td> <td>(44%)</td> <td colspan="2"></td> <td></td> <td></td> </tr> </tbody> </table> <p>The Dingxi Farmer' Training team involved 8 members (including 3 females) while the Zhunger Farmer's Trainers included 11 members (2 females). The farmer trainers were capacitized to conduct training sessions for the other farmers in the village on the subjects detailed in the Ecological Agriculture training manuals. The training manuals and training program included 9 topics: Introduction to Ecological-Farming, Soil Fertility, Cropping Systems, Weed Control, Disease Management, Soil and Water Conservation, Livestock management, Fruit Production and Farm Planning. Manuals were printed and distributed during Farmer Training sessions. In addition to the trainings and Ecological Farming Training Modules, farmers and farmer trainers also received copies of books and supplementary reading materials, technical exposures and cross-site visits, which were all successful in increasing their capacity to absorb and employ improved farm management techniques.</p>	Summary of WCAEV Trainings Delivered to Farmers under Farmer to Farmer Trainings from 2002-2005								Community	Dingxi			Zhunger			Total	Subject of Training	Male	Female	Total	Male	Female	Total		Eco farming introduction	225	214	439	131	40	171	610	Soil fertility	225	208	433	74	22	96	529	Cropping systems	237	275	512	99	31	130	642	Weed control	156	244	400	69	21	90	490	Disease control	157	203	360	119	38	157	517	Soil conservation	290	292	582	125	42	167	749	Livestock feeding/forage	210	162	372	163	73	236	608	Fruit production	9	7	16	20	7	27	43	Farm planning	181	91	272	100	26	126	398	Sub-Total	1690 (49.9%)	1696 (50.1%)	3386	900 (75%)	300 (25%)	1200	4586	PROJECT TOTAL	Male	2590	(56%)	Total		4586			Female	1996	(44%)					<p>Farmer Trainings</p> <p>It was noted in the earlier stages of the project that small-scale trainings with approximately 5 people in attendance were more successful than large-scale trainings hosting 20 or more. At that time the Project Management Team (PMT) decided to emphasize the small-scale field trainings throughout the first year. However, it was found that with the increase in farmer trainers capacity to deliver trainings, more and more large scale trainings were held during the second and third year of the project, while maintaining the small-scale field trainings throughout the entire program. To build the capacity of the farmer trainers over the period of the project is a natural outcome of the training program, gradually ensuring local ability to lead farm development after project completion.</p> <p>Farm Planning</p> <p>During the project farmer trainers reported that although farmers understand the farm-planning training and make very effective farm plans for long-term farm sustainability, they don't always follow their plan come planting time and still may select the option that will produce the most money in the short term, as often happens with potato. This particular problem was addressed by the project through crop diversification, improved management and improving crop varieties and yields (particularly in marginal fields). Intensifying forage and ruminant livestock production increased compost production to help maintain soil fertility.</p>	Rating: Green
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Subject of Training	Male	Female	Total	Male	Female	Total																																																																																																																						
Eco farming introduction	225	214	439	131	40	171	610																																																																																																																					
Soil fertility	225	208	433	74	22	96	529																																																																																																																					
Cropping systems	237	275	512	99	31	130	642																																																																																																																					
Weed control	156	244	400	69	21	90	490																																																																																																																					
Disease control	157	203	360	119	38	157	517																																																																																																																					
Soil conservation	290	292	582	125	42	167	749																																																																																																																					
Livestock feeding/forage	210	162	372	163	73	236	608																																																																																																																					
Fruit production	9	7	16	20	7	27	43																																																																																																																					
Farm planning	181	91	272	100	26	126	398																																																																																																																					
Sub-Total	1690 (49.9%)	1696 (50.1%)	3386	900 (75%)	300 (25%)	1200	4586																																																																																																																					
PROJECT TOTAL	Male	2590	(56%)	Total		4586																																																																																																																						
	Female	1996	(44%)																																																																																																																									

	<p>During the lifetime of the project in Dingxi, 3386 individual training days were conducted (including 1696 training days of women) on subjects including: Composting, Livestock Feeding and Disease Management, Silage Preparation, Farm Planning, Soil Fertility, Weed Control, Cash Crop Farming, Horticulture etc. Included in these trainings were 714 intensive individual training days (including 282 women). Of the 325 households in the village, farmers from 314 households (97%) received at least one training. In Zhunger, 1200 individual training days were conducted over the lifetime of the project (including 300 training days of women) on the topics listed above. Of the 165 households in the village, farmers from 112 households (68%) received at least one training. In total, the project conducted 4586 individual training days in the two communities, with participation of women at 44%. According to the socio-economic survey, 95% of interviewees were highly satisfied with the project.</p> <p>Farm Planning In Dingxi, 211 farm plans were drafted and renewed by farmers with assistance of trainers and in Zhunger 116 basic farm plans were drafted and renewed by farmers with assistance of trainers for a total of 327 sustainable farm plans developed during the project. The 2005 socio-economic survey reported that 64.9% of Dingxi farming households and 62% of Zhunger farming households renewed their farm plans for the coming year, indicating positive results from the initial farm plans developed.</p> <p>On the on-farm trials in Dingxi, 103 varieties of crops, forages and vegetables were distributed for trials in the 12 village groups with potatoes, peas, lentils, flax, wheat, alfalfa and millet achieving excellent results. In Dingxi, a total of 90,000 improved seabuckthorn seedlings for erosion control were distributed along with an improved variety of sheep for cross breeding. In Zhunger, 56 varieties of crop, grass and vegetable were distributed along with 6 forage processing machines. Grains, potatoes and alfalfa were found to be very successful in Zhunger. Livestock improvement was also very successful in Zhunger with several varieties of sheep and cashmere goats purchased for cross breeding, resulting in 343 offspring produced (132 male and 211 female) during the first breeding season.</p> <p>The project was highly appreciated by local farmers, technicians and government officials for its participatory training and evaluation approach. In Dingxi, almost 100 farmers from areas outside project implementation visited the variety test fields on the learning farms and in Zhunger 200 outside farmers visited the sites. Some crop varieties introduced during the project including Zhenye Pea, Beihaidao Buckwheat, Longmi millet were re-produced</p>	<p>These strategies can increase soil quality over the long term and is an effective method to promote long-term soil sustainability.</p> <p>The factors directly increasing on-farm production included the improved varieties and increased seed quality accessed by the farmers, the increase in farm technology and management and good weather in Dingxi in 2005. Through increases in production, the farmers were meeting their food needs from a smaller area, which increased the area available to farm income generating crops, which further increased their total income.</p> <p>The project has had unprecedented impacts on developing local community networks, particularly in Zhunger. The farmer trainings and learning farm activities have greatly improved local communication and sense of community, along with sharing and information exchange between local farmers. The focus on practical on-farm development led by community farmers and the establishment of local farmers associations will ensure long-term effects in the outreach and sustainability of the project.</p>	
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		and have already been extended beyond the project area. Excellent improvements in yield were also realized during the project with grain production per capita increasing from 356kg to 480kg per capita in Dingxi and from 300kg to 500kg in Zhunger. The Local Agricultural Technical Association in Dingxi and the Growers Association in Zhunger have been established for further training, information exchange, variety test and extension.		
Output 2 * Increased economic activity.	Household income increased by 20% by March, 2005.	<p>Income Local information for both beneficiary communities was collected and analyzed in 2003, 2004 and 2005 through the administration of a socio-economic survey to representative rural households. The survey found a major increase in income in both communities during the period surveyed, with a 44% increase in mean household income between 2003 and 2005 in Dingxi and a 60% increase in mean household income in Zhunger between 2003 and 2005, both of these values statistically significant.</p> <p>In Dingxi, total revenue from farm-based sources (crops, livestock and forestry) increased by 64% while total revenue from outside sources (labour, business) increased by 3%. During this same period, average household expenditures also decreased slightly. As a result, yearly household savings increased dramatically and the number of households with a yearly deficit passed from 50% in 2003 to zero in 2005. The elimination of deficits from household accounts in 2005 is probably linked to an observed increase in debt repayment which will lead to reduction in debt load and greater autonomy.</p> <p>In Zhunger, income increased significantly by 60%; the majority of income was from on-farm activities. Farming income increased by 68% while outside income sources increased by 35%. The farmers' total equity increased as well as livestock holdings were enlarged. The number of households running a negative financial balance decreased from 45% over the three-year survey period to 15% in 2005, leading to greater financial security for household expenditures. Debt repayment was the category of household expenditure that increased the most.</p> <p>Investing in farm improvement was an important factor in increasing income through farm planning, farm management, improved varieties (crops, livestock and forages) and ecological soil fertility improvement.</p>	<p>Income In Dingxi, the dramatic increase in farm revenue compared with outside income is very positive because it indicates an increased economic value of farming probably not due to outside economic factors such as inflation. It is apparent from the findings of this study that the overall financial situation of the households surveyed was greatly improved by 2005. Additionally, the increase in household savings and elimination of deficit indicates a much higher degree of financial stability than was previously present in the community.</p> <p>Zhunger showed dramatic development in increased financial independence, food and income security, and subsequent higher quality of life during the three-year project. The high increase in farming income relative to outside income sources indicated that more livelihood was invested in the farm rather than in out-migration to labour. The high debt repayment is also a strong indicator that households had moved beyond simply meeting their basic needs. Transformation to stored-livestock feed production systems was well developed by project completion. Farmers learned to produce livestock on stored feed systems (in particular corn silage, improved alfalfa and high yielding warm season grasses) which allowed them to increase their farms carrying capacity and improve household income while conforming to governmental grazing restrictions.</p>	Rating: Green
Output 3 * Improved status of women.	Participation of women in community activities at	<p>Women's Status Throughout the project, women in the communities were actively involved in all activities. In Dingxi, 50% of participants in the farmer trainings were female, while 3 women (out of 8 people) were selected as farmer trainers.</p>	<p>Women's Status It was noted since the projects inception that one of the more difficult challenges the project faced was the inclusion of women. This was due to their lack</p>	Rating: Green

	<p>20% by March, 2005.</p> <p>Perceived well-being - Improved quality of life in rural communities by March 2005.</p>	<p>Women in Zhunger have also been engaged, with an average participation of 25% in the farmer trainings and 3 women (out of 12 people) selected as farmer trainers.</p> <p>Local information for both beneficiary communities was collected and analyzed in 2003, 2004 and 2005 through the administration of a socio-economic survey. The survey found that in particular, income generated by women greatly increased over the survey period. In Dingxi, average income for women increased by 46% and in Zhunger average income for women increased by 24% over the lifetime of the project.</p> <p>Well-being Local information for both beneficiary communities was collected and analyzed in 2003, 2004 and 2005 through the administration of a socio-economic survey to representative rural households. In Dingxi, most households felt that some aspects of their lives were slightly below satisfactory, including transportation and housing, while clothing and health care were satisfactory. Some categories were considered slightly above satisfactory including: environment/surroundings, diet, education, and farming sustainability. Overall quality of life increased between 2003 and 2005 to slightly above satisfactory.</p> <p>By 2005, surveyed households in Zhunger greatly increased their satisfaction ratings, particularly in the categories of farming sustainability, diet, and environment/surroundings, respectively, which were found to greatly increase during the lifetime of the project. All categories except for education were rated slightly above satisfactory.</p>	<p>of education, limited decision making and submissive role in society. It was also noted that it was particularly more difficult to engage women in Zhunger, both in attendance and in participation during meetings due to the remote location of the village and limited social contact within. To address this, throughout the project women were engaged in important project development activities including the PRA, PM&E, and as farmer trainers and were supported to be active in the programming and to engage other women in the community through the farmer trainings and field trials. In Zhunger, more emphasis was placed on the active engagement of women, with the PMT continually improving efforts to include women in more project activities. As a result of the increased understanding of gender sensitivity, the PMT and farmer trainers in both communities set targets on the inclusion of women in various project activities as identified in the PM&E workshop. This resulted in an increase of women engaged in farmer trainings from 17% in 2003 to an overall total of 25% in 2005.</p> <p>Additionally, the improved capacity of women to generate income in the local communities can also have a profound effect on the eventual role of women in society. As women begin to more fully participate in the economic sector, they will have increased decision making power, both in the home and in general, which will result in improved autonomy over the overall direction of their lives and their capacity to provide for their families.</p> <p>Well-being The socio-economic survey indicates that the AEV model can have a great impact on the quality of life in rural communities. In both villages, the perception of quality of life improved over the course of the project. Respondents in Dingxi considered their environment/surroundings, diet, education, and farming sustainability slightly above satisfactory while households in Zhunger had greatly increased</p>	
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			satisfaction in farming sustainability, diet, and environment/surroundings during the lifetime of the project.	
Output 4 *Reduction in soil losses by 33%.	Area revegetated and contoured	<p>Soil Erosion The project was highly successful in protecting the watershed from soil erosion. This is one of the most important achievements of the project, considering the severity of the erosion problems in these communities.</p> <p>Over 100% of the activities for field level implementation have been completed in Dingxi and Zhunger in terms of re-vegetation, check dams water cellars, terrace and road making, etc. In Dingxi, project activities completed 587.3 ha of re-vegetation, 169 check dams, 352 water cellars, 101.1 ha of terrace and 25.7 km of country road construction with 7.78 km of soil erosion control. In Dingxi a total of 90,000 improved seabuckthorn seedlings for erosion control were distributed. According to the final evaluation by Chinese Ministry of Water Resources, the soil erosion rate was reduced by 35% during the lifetime of the project.</p> <p>In Zhunger, project activities completed 705.2 ha of seabuckthorn re-vegetation, 317 ha of grass, 2 check dams 2 irrigation wells and 5 km of road. Additionally, 28 silos for silage were set up for demonstration and training in Zhunger. According to the final evaluation by Chinese Ministry of Water Resources, the soil erosion rate was reduced by 65% during the lifetime of the project.</p>	<p>Soil Erosion Project activities including re-vegetation and the construction of check dams, water cellars, terrace and roads have had a tremendous effect on the local environment, reducing soil erosion levels by 35% in Dingxi and 65% in Zhunger. The transformation to stored-livestock feed production systems was well developed by project completion. Farmers learned to produce livestock on stored feed systems (in particular corn silage, improved alfalfa and high yielding warm season grasses) which allowed them to increase their farms carrying capacity and improve household income while conforming to governmental grazing restrictions to prevent further soil degradation.</p> <p>Future rural development initiatives in China should continue to include effective erosion control measures and sustainable livestock and agricultural practices such as these.</p>	Rating: Green

**COMMUNICATION
OUTPUTS**

During the lifetime of the project, efforts were made to ensure the public becomes aware of the AEV development approach, with the methods and results of the WCAEV project broadcast locally in the communities, regionally in Gansu and Inner Mongolia, nationally throughout China and internationally in Canada, Gambia, the Philippines and Nigeria. In China this includes outreach to the local outlying communities, as well as furthering ties and networking between other developmental and governmental organizations both locally and nationally in China to improve their understanding of holistic agricultural programming. The project received much attention from the local government and provincial bureaus of Water Resources in Gansu and Inner Mongolia. Many local farmers and technicians also learned of the project as the concept and methods of ecological-farming were slowly adopted in the communities.

The WCAEV project was honored to be the first selected by the Shell Foundation to be featured in a Shell China advertisement, produced to demonstrate Shell's commitment to sustainable development in China. A video and photo shoot by Shell China was finished successfully in 2003 with assistance from CACSD and Dingxi project officers.

In November of 2004, the female farmer trainer in Dingxi, Ms Gao Cunying and the Sub-Project Manager, Mr. Gao Lin were invited to present their experiences in ecological farming and income generation in a High Level Round Table Meeting on Sustainable Soil Conservation, jointly organized by the Global Water Partnership, World Association for Soil and Water Conservation and Chinese Society for Soil and Water Conservation in Jiangxi provinces. This was an opportune time to introduce the technical achievements of the project in soil conservation work and the progress in ecological agriculture while also emphasizing the concurrent social development and capacity building of the local farmers in the community. Additionally, having a woman speak as a representative of the project was a great achievement and furthered gender development in high level social forums.

A development primer on Agro-Ecological Village programming has been created. This primer details specifically what is needed, and the methodology used to encourage rural communities to become more self sufficient through ecological farming and participatory training methods. The primer includes steps and examples of how to assess community needs, develop a participatory training program, support gender development, promote sustainable energy use and biofuel consumption and ecological means to achieve greater self-reliance in agriculture. Contributions to the AEV Primer were made through the completion of the training modules, research from the learning farms and the on-farm training process.

Over the past three years REAP-Canada has participated in considerable public outreach, both within Canada and internationally. Public presentations, seminars, articles, a newly revised website (www.reap-canada.com) and an annual newsletter by the organization have exposed a wide audience to their programming and the WCAEV project. REAP-Canada's office location on the Macdonald campus of McGill University provides an ideal location to increase awareness of the project to the university community and to introduce students to the field of sustainable development. REAP-Canada regularly attends conferences in Canada and internationally where project results were shared.

REAP-Canada is part of the Canadian Environmental Network (CEN) and other associations which often host conferences and events where public engagement opportunities exist. The CEN has 27 years experience in facilitating networking among environmental organizations both within and outside of Canada with over 800 member groups involved in environmental issues. In 2003, the CEN International Caucus invited Mr. Henry Lu, Chinese Project manager, to participate and speak at the International Guelph Organic Conference (<http://www.guelphorganicconf.ca>). He also spoke at two universities in Canada, the University of Guelph and McGill University, to audiences interested in the WCAEV project and soil rehabilitation work in China. Dr. Neal Stoskopf of REAP-Canada made a presentation on the Sino-Canadian cooperation and included the WCAEV project as a successful initiative under implementation. REAP will continue its efforts of reporting on international projects at national and international conferences dedicated to ecological agriculture, rural development and food security. The project outcomes will continue to be shared with others in the development and academic communities so that any lessons learned may be applied elsewhere.

9. Beneficiaries <i>Please provide an indication of who has benefited from your project, how they have benefited or been involved, & how many total beneficiaries your project reached.</i>		
Who has benefited?	What benefits? What involvement?	How many people?
<p>The main project beneficiaries are the approximately 2300 people living in two communities in Gansu province and Inner Mongolia. The communities are located in very sensitive landscapes particularly vulnerable to soil erosion and desertification processes. There is major soil degradation from intensive wheat and potato cropping, excessive use of trees, shrubs and crop residues as fuel, over-grazing by animals, and cultivating crops on steep slopes. Low commodity prices caused by the globalization of grain markets and the high rural population create intensive demands on the land to meet the livelihood requirements of small farmers. The region suffers from a high incidence of poverty as the selected communities have a marginal income from low production levels and many of the youth are migrating to other locations in search of improved livelihoods.</p> <p>The project focused on 325 households (approximately 1470 people) in the Dingxi County, encompassing the four villages Zhangjiachuan, Fengjiacha, Chankou, and Beichuan in the Fuxing watershed. Fuxing watershed is located in the Lanzhoong Loess Plateau Hill region. The watershed area is 19.32 km² and erosion has affected 100% of this region with annual soil loss rate of 5400 tonne/km². The project also encompassed the Deshengxi watershed in Zhunger County, Inner Mongolia Autonomous region. This area is part of the Erdos plateau region that surrounds the Gobi desert. The project involved 230 households (approximately 830 people) from the four villages Sujjata, Nalingo, Bainilaing and Oboyen within this watershed.</p>	<p>Benefits realized directly through the implementation of the WCAEV project include a significant increase in household income (44% in Dingxi and 60% in Zhunger), an increase in farm revenue compared with outside sources (64% vs. 3% in Dingxi, 68% vs. 35% in Zhunger), dramatic increases in household savings, net income and debt repayment, increases in employment and reduced outward migration. The project also directly supported capacity building through education and community development, improved participation of women in community activities, increased income generated by women (46% and 24% in Dingxi and Zhunger respectively) and improved local perception of overall quality of life, sustainability, diet, and environment/surroundings. The project activities also supported a dramatic improvement in the local environment through large scale revegetation (reducing soil erosion by 35% and 35% in Dingxi and Zhunger respectively) and on farm management (reduced tillage, farm planning, increased soil quality and carbon content).</p> <p>In the long-term, the project is anticipated to improve the lives of farmers living in environmentally degraded environments through the widespread adoption of sustainable agriculture techniques and other capacity building activities at the community level. The Agro-Ecological Village Model has been implemented because it is locally adaptable and is based on the transfer of sustainable agriculture techniques to whole communities. It has strong potential to spread to other communities in China and the world facing similar agricultural constraints. As the benefits of sustainable community development are realized, the people will have greater household self-reliance through increased income and opportunities. The AEV model is distinctive in its ability to bridge the communication and information gap between the masses of peasant farmers, research institutes and the local government. Through its participatory approach and holistic design, it innovatively integrates environmental, agricultural, economic, social and gender development through capacity building, training, education and information exchange. It also demonstrates tangible development measures including farm planning, trial farms and seed distribution. It is a simple and effective model, proven in the Philippines, Gambia and China, and can be applied in almost any rural agrarian community setting. Its participatory methodology allows for high levels of beneficiary ownership, creating long lasting and sustainable results in the community.</p>	<p>The project was highly appreciated by local farmers, technicians and governors for its participatory training and evaluation approach. In Dingxi, farmers from 314 households (97% of the total 325 households in the village received at least one ecological farming training. 211 new farm plans (64.9% of the total households) were renewed and 188 of the renewed farm plans were applied in the farming in the following year. In Zhunger, farmers from 112 households (67.8% of the total 165 households in the village received at least one training. 103 new farm plans (62% of the total households) were renewed and 87 of the renewed farm plans were applied in the farming of the following year.</p> <p>The impacts of the project were also felt outside of the direct beneficiary communities. Almost 100 farmers from areas outside project implementation in Dingxi and 200 from areas outside project implementation in Zhunger visited the variety test fields on the Learning Farms. Some introduced crop varieties (e.g. Zhenye Pea, Beihaidao Buckwheat, Longmi millet) were re-produced in the communities and have already been extended beyond the project area.</p>

10. Poverty Impact Please describe, in specific terms, the impact that your project has had on reducing poverty. Include information on the two indicators listed in the table below and any other information relevant to your project. Please provide quantitative evidence where possible

Poverty impact	Evidence of impact	Scale of impact
Increased income for poor households	<p>Low commodity prices in China caused by the globalization of grain markets and the high rural population have created intensive demands on the land to meet the livelihood requirements of small farmers, resulting in a high incidence of poverty. The 2005 administration of the socio-economic survey found that both communities showed dramatic development in increased financial independence, food and income security, and subsequent higher quality of life during the three-year project. A major increase in income was observed in both communities during the survey period, with a 44% increase in mean household income between 2003 and 2005 in Dingxi and a 60% increase in mean household income between 2003 and 2005, both of these values statistically significant. In Dingxi, total revenue from farm-based sources (crops, livestock and forestry) increased by 64% while total revenue from outside sources (labour, business) increased by 3%. In Zhunger, farming income increased by 68% while outside income sources increased by 35%, indicating that investing in farm improvement was an important factor in increasing income through farm planning, farm management, improved varieties (crops, livestock and forages) and ecological soil fertility improvement. Farmers' total equity also increased as livestock holdings were enlarged. This dramatic increase in farm revenues compared with outside income is very positive because it indicates an increased economic value of farming probably not due to outside economic factors such as inflation. It is apparent from the findings of this study that the overall financial situation of the households surveyed was greatly improved by 2005. The yearly household savings increased dramatically and the number of households with a yearly deficit passed from 10 in 2003 to none in 2005 in Dingxi, and decreased from 45% in Zhunger to 15% in 2005. These findings indicate a much higher degree of financial stability than was previously present in the community with strong indications that households had moved beyond simply meeting their basic needs.</p>	<p>The main project beneficiaries were the approximately 2300 people living in two communities in Gansu province and Inner Mongolia. The project focused on 325 households in the village of Dingxi and 165 households in the village of Zhunger.</p>
Increased income for women	<p>The quality of life for rural women is poor in this historically patriarchal society as their workload is heavy, decision-making and education are limited and they rarely leave their villages. Local information for both communities was collected and analyzed in 2003, 2004 and 2005 through the administration of a socio-economic survey. The survey found that in particular, income generated by women greatly increased over the survey period. In Dingxi, average income for women increased by 46% and in Zhunger average income for women increased by 24% from 2003 to 2005. As women begin to more fully participate in the economic sector, they will have increased decision making power, both in the home and in general, which will result in improved autonomy over the overall direction of their lives and their capacity to provide for their families.</p>	<p>The beneficiaries were approximately 1150 women living in two communities in Gansu province and Inner Mongolia.</p>
Reduced outward migration	<p>There also is a growing disparity in wealth in China as peasant farmers are left behind while the nation expands economically. Rural folk, particularly men and young adults, are forced to migrate outwards from their villages to work for income, further destabilizing farm resources and the family structure. The survey findings of greatly improved income generation, particularly on-farm income, improved household savings, improved access to local employment coupled with increased local capacity for environmental protection and an improved perception of quality of life indicate an improvement in the economic and social opportunities present in the local villages and farmers being more content with their situation. Farmers in both communities, especially in Dingxi, realized farm income was the most successful means to increase household income.</p>	<p>The beneficiaries were approximately 2300 people living in Gansu province and Inner Mongolia.</p>
Improved livestock	<p>Marginalized farmers in Gansu province and Inner Mongolia are amongst the poorest farmers in Western China, generating most of their income through livestock and agriculture in the face of desertification, and recently disadvantaged by their recent loss of farmlands through Governmental land restriction policies. The Government is undertaking efforts to revegetate through grazing prohibitions and planting shrubs, providing significant benefits in erosion control and wildlife habitat. However, grazing restrictions and removal of land from production also severely limit the livelihoods of marginalized people living in these difficult areas. Farmers are compensated for the land reclamation with imported wheat, which increases dependency on the government for livelihood and food security. New options are needed that increase farmers well being and protect the environment on these lands. The transformation to stored-livestock feed production systems was well developed by WCAEV project completion. Farmers learned to produce livestock using stored feed systems which allowed them to increase their farms carrying capacity and improve household income while conforming to grazing restrictions. This could provide a major mechanism for support to marginalized farmers across China as the government continues to implement its soil conservation strategies.</p>	<p>The main beneficiaries were the approximately 2300 people living in Gansu province and Inner Mongolia.</p>

SECTION 3: REPLICATION AND FOLLOW-UP

10. Co-Funding: <i>Please quantify the source and the amount of any co-funding you have received for this project.</i>		
Source	Funding amount	New source (Y/N)
Department of Water and Soil Conservation, Ministry of Water Resources, P.R. China	\$558,649	Funding was provided as agreed in original WCAEV project contract set out in 2001.

11. Replication and scaling-up: We are interested in hearing about any other organisations or enterprises that are replicating your project activities as a direct result of your work. Also, please describe any further activities you will implement after the end of the Shell Foundation grant period.

Organisation	Activities replicated
Local Agricultural Technical Association in Dingxi, Growers Association in Zhunger	The Farmers Associations and local government resource people will continue to be in place and provide services to the community to support their development efforts. These organizations will further ecological farming by continuing local training, information exchange, learning farm development and variety tests and extension into the local and surrounding communities. To support this, each association has drawn up a constitution, selected a board, established membership guidelines and contributions (fees/in-kind), developed regulations on variety exchanges and outlined benefits of membership including access to plant materials, livestock, equipment and other supplies for the community.
Department of Water and Soil Conservation, Ministry of Water Resources, P.R. China	The concept and methodology of eco-farming, farm planning and the Agro-Ecological Village (AEV) will be adopted for other government supported projects for soil conservation, afforestation, rural development and poverty alleviation in Dingxi and Zhunger and beyond.

Your own planned follow-on activities:

By strengthening the farmers' institutions, and developing bottom up training programs, the development process in communities will continue beyond the project's lifespan. With the emergence of new community organizations in both Dingxi and Zhunger, community participation has already shown marked development and can be expected to continue after the project lifetime. The newly established Farmers Associations are being led by progressive farmer leaders with minimal need for human or financial inputs from outside the community. The investment in empowering and training farmers generates a high capacity to continue the development process. Increased farm income will allow farmers to reinvest capital into newly identified opportunities such as the establishment of communal greenhouses. The emphasis on ecological farming systems, training and development, contour farming, and re-vegetation of sloping lands will also ensure the long term maintenance and improvement of the agro-ecosystems from which the rural economies can continue to evolve. The Chinese government staff have embraced the participatory AEV approach for rural development and increased their understanding of it as the project evolved.

REAP-Canada will continue to share project outcomes with others in the development and academic community so that any lessons learned may be applied elsewhere. The Agro-Ecological Village Model is locally adaptable and is based on the transfer of sustainable agriculture techniques to whole communities. REAP-Canada will continue to develop and promote the AEV model, both in China and internationally. It has strong potential to spread to other rural communities facing similar agricultural constraints in China and around the world. As the benefits of sustainable community development are realized, rural people will have greater household self-reliance through increased income and opportunities.

Plans for scaling-up project activities

The concept and methodology of eco-farming, farm planning and the Agro-Ecological Village (AEV) will be adopted for other government supported projects for soil conservation, afforestation, rural development and poverty alleviation in Dingxi and Zhunger and beyond.

SECTION 4: MANAGEMENT, PARTNERSHIP & COMMUNICATION

12. Project management: *Please evaluate whether overall project management was effective. What were the principal management challenges that you faced in implementing this project?*

During the project, REAP took the lead in the organizing and training aspects of the project using resources allocated from the Shell Foundation. The Department of Soil and Water Conservation under the Ministry of Water Resources of the Peoples Republic of China led field level implementation using resources allocated by the Chinese Central Government. The Department of Water and Soil Conservation contributed the main office and four staff to the project Mr. Henry Lu, Dr. Xu Shuangmin, Ms. Wen Xiufeng and Ms Xu Tao. Both in Dingxi and Zhunger there was a Local Sub-Project Office with a Project Implementing Team (PIT) led by the local Sub-project Manager. Mr. Henry Lu led the Project Management Team (PMT) under the Ministry of Water Resources had an excellent partnership with the sub-project officers in Dingxi and Zhunger, and representatives from REAP and Shell. The project partners successfully fulfilled their respective responsibilities outlined in the project workplan. Planning meetings were held between various project partners and staff to continuously clarify roles and responsibilities for project implementation, refine timetables and to identify staff and key community members to be involved in the project. Bi-monthly assessment meetings and a bi-annual general project evaluation were also held to ensure project participants could evaluate progress and take corrective action as required.

Through the project lifetime there have been some adjustments to the project management structure. One of the main initial changes was the role of the Community Organizers, originally intended to be performed by one person responsible for facilitating organizational strengthening activities, social preparation for technical trainings and coordination of activities with local project officers, including monitoring and assessment of field activities and trainings. However, it was found to be more appropriate if this role was covered by four people in each community, complementing the existing community structure and maximizing long-term developmental impact. Four community organizers now successfully work in Dingxi and Zhunger respectively, each a village leader with the project duties corresponding to their existing role in the community. Another important change in the management structure of the project was the re-emergence of the distinction between the Project Technical Team (PTT) and the Project Implementing Team (PIT). Initially these two teams were joined because in the initial stages of the project the members of the PTT and PIT involved the same people. However after the project reached a more advanced stage of development in 2003, the project stakeholders recognized the important and distinct roles of the PTT and PIT. The two teams re-diverged as community members began specializing their interests. The formal PIT was composed of local community organizers, village group leaders, trainers, local farmers, local government extension personnel, other technical persons and farmers from the farmer technical groups. The PIT facilitated project organizing and implementation, providing a link between the community and the PMT. They were responsible for coordinating and conducting technical trainings and on-the-job training/coaching, and involved in field implementation and on farm research. They also provided feedback and reports during the project assessment and planning sessions on the status of their logistical work to the local project coordinator and PMT. The Project Technical Team (PTT) was composed of farmer leaders, farmer trainers, local government extension personnel, other technical persons and farmers from the farmer technical groups. The PTT was responsible for participating in technical trainings and on-the-job training/coaching, and assisting in field implementation and on-farm research. They also provided feedback on the status of their work to the PMT. The PIT, PTT and PMT continued to be strengthened throughout the project through the use of participatory techniques, trainings, assessments and consultancy services from Chinese and Canadian experts. The process of building up the capacity of these local institutions was paramount to project success, and by continuing to support them, while engaging the local community to become active in the development process, stakeholders increasingly took responsibility in the many different levels of project administration, ensuring effective, responsive and accountable project management.

Overall it was found that the management of this project was highly effective due to excellent communication and discussion, input from all levels and flexibility to accommodate the existing local social structure. It was particularly important to include local village officers, local soil bureau staff and technicians in the partnership as they understood both the situation in the local villages and the requirements expected from their superiors. Throughout the project, the trend to increase localized management was supported and embraced through participatory development approaches. The AEV model provided an effective means to ensure that this transfer took place and local community groups were formed and supported in 2004. In Dingxi, a Local Agricultural Technical Association was established to continue the extension and management of crop, vegetable and fodder varieties and utilize the results of the project on a long-term basis. The farmers in Zhunger also establishes a Growers Association with the purpose of continuing the training, technical support exchanging varieties, crops, livestock, improve safety for farmers after the project phases out. Through the establishment and development of these non-political community organizations, communities can continue to strengthen their participation in the project and in other local government programs, ensure improved access to information and provide farmers with more collective bargaining power when pioneering innovative marketing systems in China's developing market economy.

13. Partnership *Please describe briefly how project partnerships (and any other unplanned or unexpected partnerships) evolved over the course of the project, & what problems or issues arose. In retrospect, were the original partners best suited to deliver project outputs? If not, what type of partners might have been more effective? Were there skills that you would have like to have added to the original skills mix of the partners?*

The Sino-Canadian partnership aims to improve the communication and support and technology sharing between Countries like China and Canada, as well as to increase the self reliance of marginalized Chinese farmers living in environmentally sensitive areas, while at the same time reclaiming degraded and vulnerable environments.

The project implementing agencies have made an effort to ensure a high degree of ownership by the project beneficiaries through the use of a community based, participatory development approach. With a focus on institution and capacity building, communities have identified their constraints, opportunities and needs in China through a participatory rural appraisal process. The farmer-to-farmer training program allows local farmers to take the lead in the capacity building process. The ecological farm planning process relies on engaging local farmer trainers. With the emergence of new community organizations in both Dingxi and Zhunger, community participation has already shown marked development and can be expected to continue to improve after the project lifetime.

The project partners were highly suited to implement this project based on their technical skills and knowledge of rural community development. Throughout the project, the Bureau of Soil and Water Conservation worked with farmers in the communities to lead the implementation of field work. REAP provided a technical supporting role in project implementation around ecological farming, energy issues and economic and social development strategies. Local governmental staff also played a critical role in the implementation of project activities including the organization of training activities and farm trials. Communication between international project partners continued to improve throughout the project through increased understanding of the others expectations. Additionally, Project Manager Mr. Henry Lu visited Canada in January of 2003 where he was involved in conferences, meetings and presentations. These relationships have slowly evolved to work together to ensure the development of local communities. Effective partnerships take years to form and require mutual respect and a solid foundation, which is what the project partners feel they have achieved in the three years working together. While it has been recognized that the project stakeholders have different orientations, agendas and experiences, all partners are working hard to make certain that the WCAEV development initiatives are fully embraced in the communities, and that the Sino-Canadian relationship is a lasting one.

The project partners also hope that their relationship may continue to grow and evolve. With REAP-Canada's increased understanding of the technical development regarding soil and water conservation in China and the structure and functioning of China's many levels of local and international government and the CACSD's improved capacity around participatory development, community organization and farmer to farmer education systems, the project partners feel that their approach will be recognized as one of the emerging scenarios for China's sustainable development. Now that the AEV communities have improved and steadied their ecological crop and fodder production, the project partners are also looking for new ways to support these communities and engage them in the emerging new market economy of China. The increase in capacity to generate sustainable income and improve the general quality of life in rural areas is a natural evolution of the AEV approach. The project partners anticipate continued growth and success in these communities and other regions affected by environmental degradation due to our increased understanding of how sustainable development can be achieved in China.

14. Shell Foundation Management: *Please let us know how we could improve our support to projects in the future. What aspects of support from the Shell Foundation were the most useful and which aspects, in your view, require improvement.*

It would have been beneficial for Shell Foundation to have visited the project at closure. This would have provided a more effective understanding of the real progress achieved in the communities and the potential for the AEV to be implemented in other areas.

15. Local Shell company support: *Please reflect on the nature of support you have received from the local Shell company. Briefly state what type of support you expected and what was given. Was the support helpful? What type of support would have preferred?*

The WCAEV project was honored to be the first to be selected by the Shell Foundation to be featured in a Shell China advertisement, which was produced to demonstrate Shell's commitment to sustainable development in China. The video and photo shoot by Shell China was finished successfully in 2004 with assistance from CACSD and Dingxi project officers. The promotion is intended for Chinese public only and was shown countrywide.

16. Communication *In your proposal you described how you planned to communicate your results or lessons learned to your key target audience (Section 3.16). Please evaluate how successful your strategy proved to be and any lessons learned*

In our original proposal, a number of communication and public outreach strategies were outlined and realized successfully. During the lifetime of the project, efforts were made to ensure the public becomes aware of the AEV development approach, with the methods and results of the WCAEV project broadcast locally in the communities, regionally in Gansu and Inner Mongolia, nationally throughout China and internationally in Canada, Gambia, the Philippines and Nigeria. In China this includes outreach to the local outlying communities, as well as furthering ties and networking between other developmental and governmental organizations both locally and nationally in China to improve their understanding of holistic agricultural programming. The project received much attention from the local government and provincial bureaus of Water Resources in Gansu and Inner Mongolia. Many local farmers and technicians also learned of the project as the concept and methods of ecological-farming were slowly adopted in the communities.

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In November of 2004, the female farmer trainer in Dingxi, Ms Gao Cunying and the Sub-Project Manager, Mr. Gao Lin were invited to present their experiences in ecological farming and income generation in a High Level Round Table Meeting on Sustainable Soil Conservation, jointly organized by the Global Water Partnership, World Association for Soil and Water Conservation and Chinese Society for Soil and Water Conservation in Jiangxi provinces. This was an opportune time to introduce the technical achievements of the project in soil conservation work and the progress in ecological agriculture while also emphasizing the concurrent social development and capacity building of the local farmers in the community. Additionally, having a woman speak as a representative of the project was a great achievement and furthered gender development in high level social forums.

A development primer on Agro-Ecological Village programming has been created. This primer details specifically what is needed, and the methodology used to encourage rural communities to become more self sufficient through ecological farming and participatory training methods. The primer includes steps and examples of how to assess community needs, develop a participatory training program, support gender development, promote sustainable energy use and biofuel consumption and ecological means to achieve greater self-reliance in agriculture. Contributions to the AEV Primer were made through the completion of the training modules, research from the learning farms and the on-farm training process.

Over the past three years REAP-Canada has participated in considerable public outreach, both within Canada and internationally. Public presentations, seminars, articles, a newly revised website (www.reap-canada.com) and an annual newsletter by the organization have exposed a wide audience to their programming and the WCAEV project. REAP-Canada's office location on the Macdonald campus of McGill University provides an ideal location to increase awareness of the project to the university community and to introduce students to the field of sustainable development. REAP-Canada regularly attends conferences in Canada and internationally where project results were shared.

REAP-Canada is part of the Canadian Environmental Network (CEN) and other associations which often host conferences and events where public engagement opportunities exist. The CEN has 27 years experience in facilitating networking among environmental organizations both within and outside of Canada with over 800 member groups involved in environmental issues. In 2003, the CEN International Caucus invited Mr. Henry Lu, Chinese Project manager, to participate and speak at the International Guelph Organic Conference (<http://www.guelphorganicconf.ca>). He also spoke at two universities in Canada, the University of Guelph and McGill University, to audiences interested in the WCAEV project and soil rehabilitation work in China. Dr. Neal Stoskopf of REAP-Canada made a presentation on the Sino-Canadian cooperation and included the WCAEV project as a successful initiative under implementation. REAP will continue its efforts of reporting on international projects at national and international conferences dedicated to ecological agriculture, rural development and food security. The project outcomes will continue to be shared with others in the development and academic communities so that any lessons learned may be applied elsewhere.

17. Digital photographs *We would like to promote your project on the Shell Foundation website. If you have any digital photographs, please send them to us by email as JPEG attachments (communities@shellfoundation.org)*

18. Any other comments *Please use this space to share any other information that has not been covered in the report but which you think is relevant*

SECTION 5: NOTIFICATIONS

19. Contact details *We would like to stay in touch. Please let us know if since your last report, the main contact person has changed? If Yes, please provide new contact details*

Name of contact person	Postal address	Contact details	
		Telephone:	
		Fax:	
		Email:	

SECTION 6: DECLARATION

I confirm that the details contained in this report are correct & are representative of the current status of the project. I am the responsible manager² for the project.

Name	Roger Samson
Position in organisation	Executive Director
Date	August 15, 2005
Signature <i>Please sign the report after you have printed it. <u>Shell Foundation requires a signed hardcopy of the report, as well as an advance email copy.</u></i>	

² As stated in the Letter of Understanding