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Effects and Problems of the Direct Payment System for Hilly and Mountainous Areas



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1. Current Facts and Problems of Hilly and Mountainous Areas

(1) Current facts and trend of hilly and mountainous areas

[Share of resources etc. of hilly and mountainous areas]

- Number of rural communities (2000) 67,132 (49.7% of total)
- Number of farm households (2005) 1.23 million (43.3% of total)
- [commercial farm] 820 thousand households (41.7%)
- Total population (2005) 17.41 million (13.6% of total)
- Population of farm households (2005)
 Gross agricultural output (2005)
 3.32 million (39.7% of total)
 3.4 trillion yen (38.8% of total)
- Gross agricultural output (2005)
 Total land area (2005)
 3.4 trillion yen (38.8% of total)
 24.08 million hectares (64.8% of total)
- Forest area (2005) 19.86 million hectares (79.9% of total)
- Cultivated area (2005) 2.03 million hectares (43.3% of total)

[Trend of resources etc. of hilly and mountainous areas]

- Number of rural communities (1990-2000) -2,555 (-3.7%)
- Number of farm households (2000-2005)
 Number of farm households (2000-2005)
 -162 thousand (-12.0%)
- Number of farili nousenoids (2000-2003) -102 mousand (-12.0%)

 Nationwide: -11.7%
- Population of farm households (2000-2005) -832 thousand (-20.0%)
 - Nationwide: <u>-20.0%</u>
- Cultivated area (1995-2005) -60 thousand hectares (-2.9%)

 Nationwide: -6.9 %

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(1) Current facts and trend of hilly and mountainous areas (continued)
[Aging in hilly and mountainous areas]
                                (1995) (2000)
                                                                      (1995) (2000) (2005)

    Total population

                                21.7\% \rightarrow 25.1\% \rightarrow 27.3\%
                                                          Nationwide: 14.5%→17.3% →20.1%
   • Population of farm households 26.2\% \rightarrow 30.5\% \rightarrow 33.5\%
                                                          Nationwide: 24.7%→28.6%→31.6%
   ● Farmers [commercial farm] 29.9%→34.7%→39.5%
                                                          Nationwide: 28.4%→33.1%→37.8%
       Note: Population of farm households in 2005 is for commercial farm households only.
[Condition for agricultural production]
  * The 4th basic research of infrastructure development for farmland use (2001)

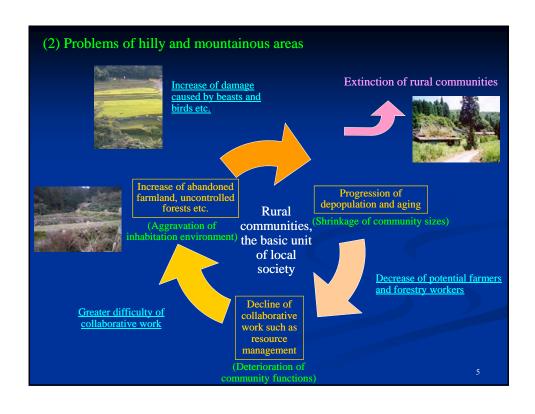
    Sloping of paddy fields

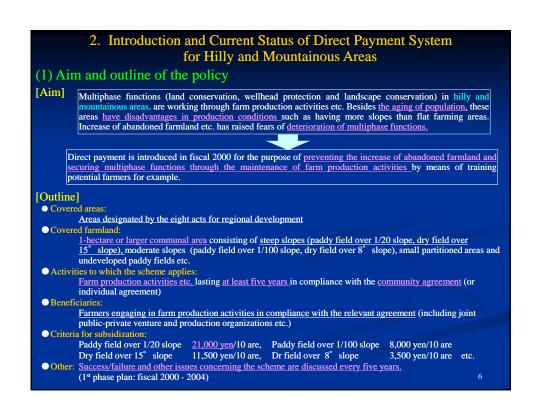
        Hilly and mountainous areas
                                        Steep slope: 26.1%
                                                                     Mild slope: 52.5%
                                        Steep slope: 6.5%
                                                                     Mild slope: 34.5%
        Flat farming areas

    Infrastructure development for farming

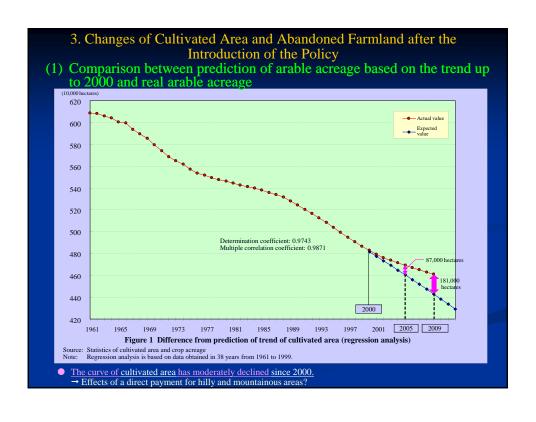
                                            (Paddy field)
                                                                         (Dry field)
        Hilly and mountainous areas
                                         30-are or larger: <u>52.1%</u>
                                                                     Field irrigation: 8.7%
                                                                     Field irrigation: 15.0%
        Flat farming areas
                                         30-are or larger: 68.7%
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(1) Current facts and trend of hilly and mountainous areas (continued) [Share of abandoned farmland] (2005 [total]) 38.9 million hectares (100.0%) Note: [total] means the total of areas Nationwide: owned by farm households, Urban areas: 7.9 million hectares (20.3%) agricultural holdings and land-Flat farming areas: 10.0 million hectares (25.7%) owning non-farm households 14.9 million hectares (38.3%). Hilly farming areas: Hilly and mountainous Mountainous farming areas: 6.0 million hectares (15.4%) areas total 53.7% [Trend of abandoned farmland] [total] (1995)(2000)(2005)Hilly and mountainous areas Area of abandoned areas 13.2000 hectares 209,000 hectares Rate of abandoned areas 7.7% 13.1% Flat farming areas Area of abandoned areas 67,000 hectares 87,000 hectares 100,000 hectares Rate of abandoned areas 5.6% 3.3% 4.6%

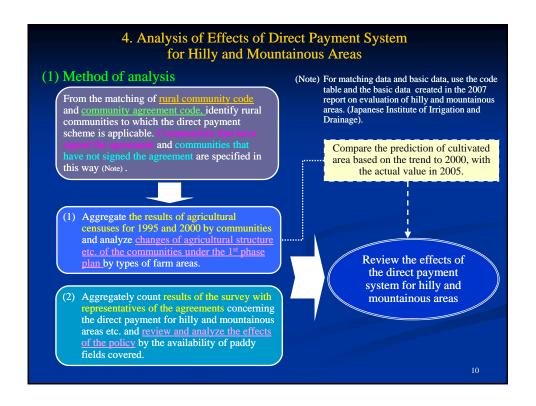


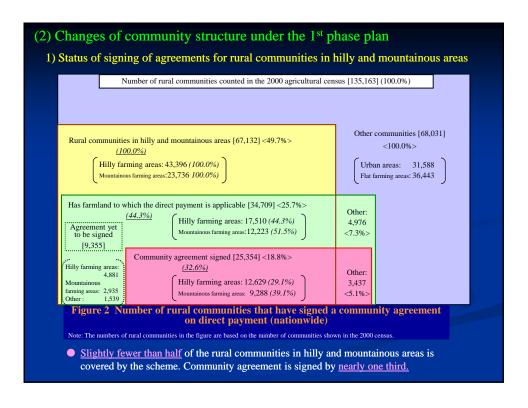


(2) Results of direct payment for hilly and mountainous areas and review of the scheme for the 2nd phase Status of implementation of direct payments for hilly and mountainous areas etc (Unit: 1,000 hectares, 10 million yen) 2nd phase plan 1st phase plan 2000 2001 2002 2003 2004 2005 2006 2007 2008 Number of agreements 26,119 32,067 33,376 33,775 33,969 27,869 28,515 28,708 28,757 Number of community 25,621 31,462 32,747 33,137 33,331 27,435 28,073 28,253 28,299 Acreage of targeted farmland 798 782 784 783 787 801 805 807 809 Acreage of farmland with 541 632 655 662 665 654 663 665 664 82% 68% 81% 83% 85% 85% 82% 82% 82% 4,194 5,142 5,383 5,458 5,491 5,025 5,135 5,170 5,179 Total payments Status of implementation of direct payment for hilly and mountainous areas etc. (Rural Development Bureau, Ministry of Agriculture, Forestry and Fisheries) Review of the scheme in the 2nd phase plan (fiscal 2005 – 2009) Creation of community master plan (mandatory) Unit value of subsidies determined in accordance with the details of activities of the community Basic rate (80% of system development rate): proper farm production activities for five years (limited to management of watercourses, farm roads etc.) System development rate (100%): in addition to the above, preparations for farm production activities for the future are strengthened (creation and use of farmland conservation map, improvement of productivity and profitability, training of potential farmers, two or more projects involving multiphase functions)



(2) Comparison between prediction of abandoned farmland based on trends in the 1995 – 2000 period and results of the 2005 census Table 2 Difference between the prediction of abandoned farmland and results of the 2005 census (Unit: 1,000 hectares, %) Abandoned farmland (1,000 hectares) Rate of abandoned farmland National total Hilly and mountainous Urban and flat area area National Urban and rea of increase total flat area area Actual value 217 4.5 3.3 6.5 } 15 (13.1%) 32 (14.7%) 17 (16.6%) Actual value 249 117 132 5.4 4.0 7.7 56 (42.4%) 97 (39.0%) 41 (35.0%) Actual value 7.7 11.2 21 (11.2%) 44 (12.6%) 23 (14.4%) Prediction 10.4 7.1 15.8 389 } -65 (-14.3%) 180 -15 (-7.8%) 9.1 6.7 13.1 1990 - 2005 period and 2000 Prediction values for 2005 were calculated in the following procedures: (1) use the Markov Model with the correlation table of the number of farm households by cultivated area in a 1995 – 2000 period, to estimate the cultivated area for farm households and (2) use regression analysis to estimate cultivation area for agricultural holdings and hand-owning non-farm households, followed by multiplication the difference between the total cultivated area of both ((1) and (2)) and the acreage in 2000 by the rate of cultivated area desolation (ratio in a 1995 – 2000 period). The rate of increase of abandoned farmland dropped in a 2000 – 2005 period. As a result, the abandoned farmland in 2005 is drastically below the prediction especially in hilly and mountainous areas (smaller by approx. 50,000 hectares). → Effects of the introduction of a direct payment for hilly and mountainous areas?





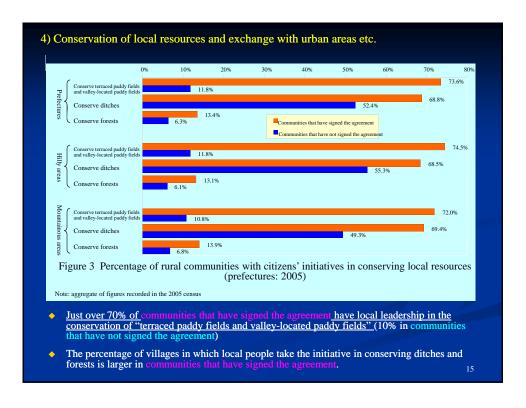
before the start of the direct payment (prefectures) (Unit: communities, %													
		Number of rural communities to be analyzed	Mountainous or canyon- like landform (%)	Number of h per comm Total number of households		Arable acreas (h		Steeply sloping paddy fields (%)	Infrastructure development of paddy fields (%)	Availability of agricultural association (%)	Annual number of meetings (times)	Ditches managed by collaborative work (%)	Availabii of youth- organizati (%)
Prefecture	Communities that have signed the agreement	23,416	51.6	58.6	21.8	24.0	14.6	12.8	65.5	74.9	8.9	73.6	31.
Presecture	Communities that have not signed the agreement	9,302	48.8	64.7	20.9	21.8	12.2	14.4	57.3	69.6	8.1	69.6	26
Hilly farming	Communities that have signed the agreement	11,894	48.1	59.9	21.7	24.2	14.3	12.7	62.8	74.7	8.7	73.5	30
areas	Communities that have not signed the agreement	4,860	43.1	66.2	20.3	20.6	12.2	<u>14.1</u>	<u>55.9</u>	71.3	8.0	<u>69.4</u>	<u>25</u>
Mountainous		8,845	60.8	53.4	21.2	21.1	13.3	14.4	68.4	71.1	9.0	72.4	30
farming areas	Communities that have not signed the agreement	2,924	64.0	56.2	20.5	19.4	<u>10.6</u>	<u>16.9</u>	<u>61.1</u>	61.7	8.2	<u>68.6</u>	<u>26</u> .
Paddy paddy	acreage in the cofields and a low	rate of	infras	hat have tructure	e not s	igned t lopmer	he agr	eemen	is sma	all, wit	h man	y slopii	ng

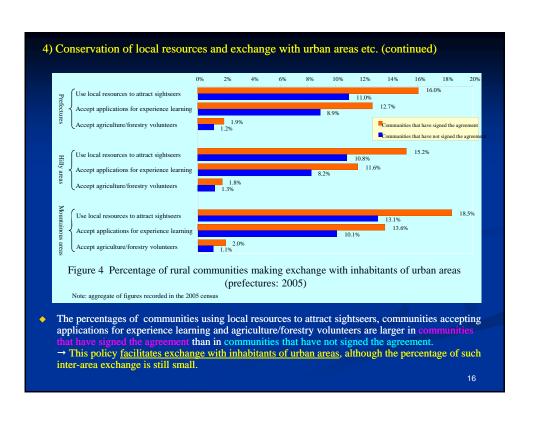
3) Changes of agricultural structure in rural communities Table 4 Changes of frequency of farmland use and number of farm households (prefectures) (Unit: %) Farm households wit a cohabiting successor Rate of abandoned areas seholds to be Farm usehold: Total Increase Paddy Increa decrea analyzed farm 2005 point versus 2000 2005 versus 2000 23,416 -7.8 -8.9 -7.5 7.8 13.5 1.7 -8.0 -14.8 12.2 39.6 -10.4 Communities that have 9,302 10.7 -11.2 10.2 39.2 -12.6 21.0 3.3 -9.0 -15.1 10.4 -11.4 igned the agreement 11,894 -7.5 -9.1 -7.8 7.5 14.1 1.7 -8.2 -16.3 11.7 39.5 -10.7 Communities that have no 4,860 8.7 -9.9 10.2 39.3 -12.0 11.4 -16.4 8,845 -9.2 -9.9 -8.3 7.5 14.1 1.9 -7.3 -13.4 13.1 38.6 -8.7 2,924 -15.9 -8.6 -18.1 10.0 -7.9 -13.5 37.6

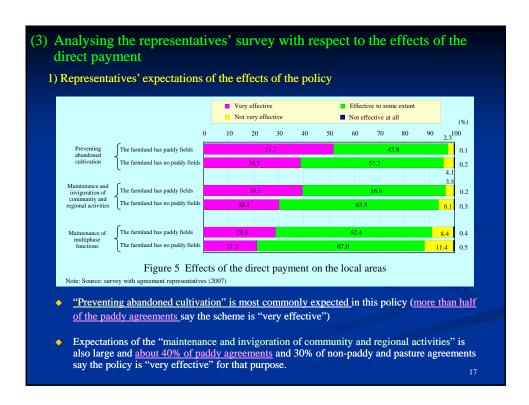
- Note: 1) Source: aggregate of figures recorded in the research of farm management entities in the 2000 and 2005 agricultural censuses 2) All of the percentages of increase/decrease were recorded in a 5-year period between 2000 and 2005.
- The percentage decreases in cultivation acreage and increase in abandoned farmland are smaller in communities that have signed the agreement than in communities that have not signed the agreement.
 → The effects of preventing cultivation abandonment have appeared.
- The percentage decrease in the total number of farm households is slightly smaller in communities that have signed the agreement and little difference is recognisable concerning commercial farm households (the difference is recognisable in the percentage increase in non-commercial farm households in hilly and mountainous areas).
- Difference in the percentage of farm households that have a cohabiting successor is minor (degree of drop in a five-year period is largest in communities that have not signed the agreement located in hilly farming areas)
 → The policy has not yet led communities to find successors.

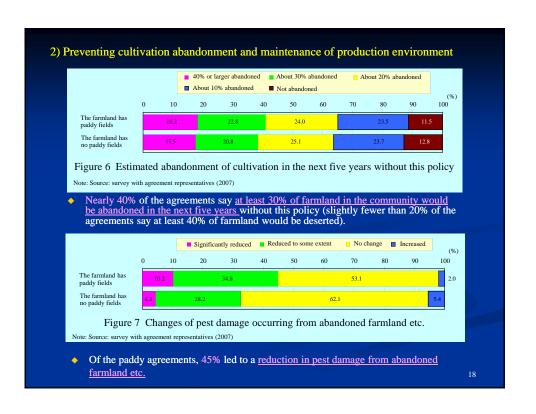
3	3) Changes of agricultural structure in rural communities (continued)													
	Table 5 Changes of farm workforce and status of participation in production organizations (prefectures)													ıres)
	(Unit: %)													
		Population of farm households			Population r	nainly engage	ed in farming		munities with farm producti	Farm households participating in production				
			Increase/ (comm		ging ercial farm seholds)	Increase/ decrease	Aging (commercial farm households)		Increase/decrease of communities		Percentage of the number of communities		organizations (commercial farm households)	
			(farmers total) 2005	2005	Increase/ decrease point versus 2000	(commercial farm households)	2005	Increase/ decrease point versus 2000	Production organizations total (actual)	Organizations sharing machinery and facilities	2005	Increase/ decrease point versus 2000	2005	Increase/ decrease point versus 2000
F	Prefecture	Communities that have signed the agreement	-14.7	34.0	3.9	-11.9	62.7	6.0	2.3	3.1	49.7	1.1	16.8	0.4
		Communities that have not signed the agreement	-15.8	34.3	3.8	-15.6	62.9	5.3	-6.8	-7.9	28.4	-2.1	8.7	-1.4
	Hilly farming areas	Communities that have signed the agreement	-14.9	33.8	3.9	-12.4	62.3	6.0	20	2.7	50.9	1.0	16.1	0.0
		Communities that have not signed the agreement	-16.3	34.4	3.7	-16.3	63.5	5.3	-7.9	-9.7	28.8	-2.5	8.4	-1.7
	Mountainous farming	Communities that have signed the agreement	-14.5	35.8	4.0	-11.2	<u>67.5</u>	6.1	2.4	2.8	<u>44.7</u>	1.0	<u>17.2</u>	<u>0.9</u>
	areas	Communities that have not signed the agreement	<u>-16.3</u>	<u>37.0</u>	4.1	-17.3	<u>68.2</u>	5.1	<u>-10.5</u>	<u>-10.2</u>	20.1	<u>-2.4</u>	7.1	-0.7

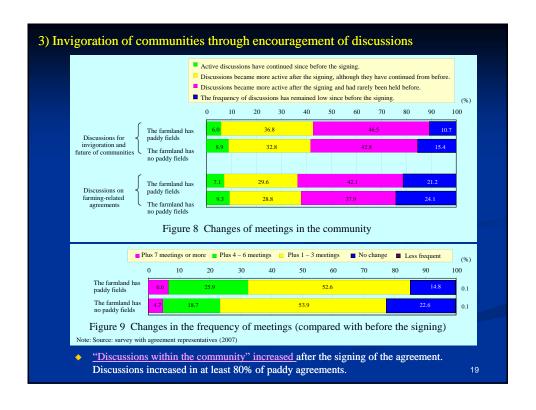
- Note: 1) Source: aggregate of figures recorded in the research of farm management entities in the 2000 and 2005 agricultural censuses
 2) All of the percentages of increase/decrease were recorded in a 5-year period between 2000 and 2005.
 - No significant difference is recognisable in the percentage decrease in the farmer population. However, the
 percentage decrease in the population of the agricultural workforce is larger in communities that have not signed the
 agreement (the status of aging has changed very little).
 - ◆ A marked contrast is recognisable in the status of participation in farm production organizations. While the percentage of farm households participating in production organisations and the percentage of farm households are both dropping in communities that have not signed the agreement, the percentages are increasing in communities that have signed the agreement (particularly remarkable in "Organizations sharing machinery and facilities").
 → Leading to sharing in farm production, besides collaborative work in the conservation and management of farmland and ditches

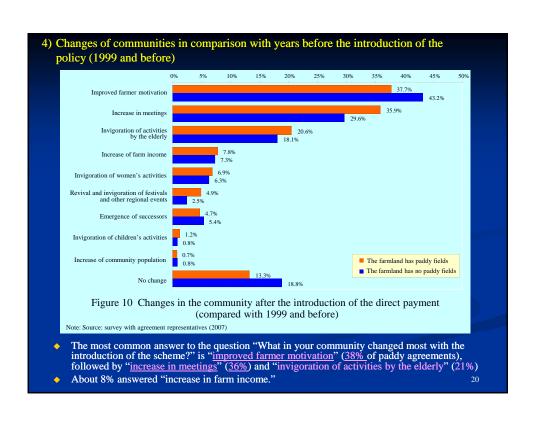












(4) Summary

- The trend in the five-year period for the 1st phase plan alone is enough to show the great significance of the scheme's effects on preventing the abandonment of cultivation. (With and without the agreement, differences between the decrease in cultivated area and the increase in abandoned farmland are clear. Similar results are found in the survey with the agreement representatives)
- No significant difference is recognisable in the number of farm households and the downward trend
 in the population of farm households. However, a <u>clear difference is recognized in the downward</u>
 <u>trend in the number of agricultural workforce</u> (however, no difference is recognisable in aging)
- Considerable change in the status of participation in "organizations sharing machinery and facilities" and other production organizations (<u>management of local resources evolves into sharing in farm production</u>)
- In some regions, the signing of a community agreement has led to an in meetings, activities for maintaining multiphase functions as well as farm production and exchanges with inhabitants of urban areas (effectively invigorating the communities).
- After the introduction of the policy, <u>about 40%</u> of agreements <u>improved farmer motivation</u>.
 Moreover, just over 80% of the communities undergo some changes in comparison with before the signing.

Direct payment system for hilly and mountainous areas

Very effective in invigorating communities as well as preventing the abandonment of cultivation

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5. Issues to be Tackled in the Direct Payment System for Hilly and Mountainous Areas

- Shift to a more consistent policy based on a long-term view
- Permanence of the system (the current mechanism in which the existence of the policy is reviewed every five years is very weak)
- Clarification of the aim of this policy (supplementation of disadvantages in production conditions, subsidization for revitalization of communities, structural policies, plans for core farmers?)
- Review of covered areas and farmland
- Treatment of sporadically located farmland and other farmland that are not covered by the system and are adjacent to farmland covered by the system
- Determine the unit value of subsidies and review the amount shouldered by local governments
- Review the grounds for calculation of unit value
- Review the basic rate (80% of system development rate) and increase additional measures (additional subsidies)
- Gaps in the operation of the policy occur among local governments depending on their financial situations.
- <u>Coordination of relations with other policies</u> (measures for improvement of conservation of farmland, water and environment, for example)
- Discuss actions to prevent farmers from withdrawing from the agreement and plans to support them
- Discuss actions to support communities that have not signed the agreement



Some of these issues will be reviewed in the 3rd phase plan.

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