

INSTITUTO INTERAMERICANO DE CIENCIAS AGRICOLAS · OEA

SUB DIRECCION GENERAL ADJUNTA DE PLANIFICACION

DIRECCION DE EVALUACION



INFORME DE EVALUACION DEL PROYECTO:

Estudio de Implementación de Agricultura en Zonas Montañosas
PROYECTO IV.XLJ.11

Junio 1980

Hugo Cohan
Rufo Bazan

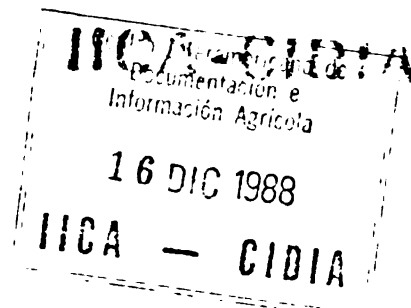
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Estudio de Implementación de Agricultura en Zonas Montañosas

PROYECTO IV.XLJ.11

Junio 1980

**Hugo Cohan
Rufo Bazan**

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PROYECTO IV.XLJ.11"Estudio de Implementación de Agricultura en Zonas Montañosas"

(Proyecto Piloto Allsides)

F.S.B.

I. INTRODUCCION

En Febrero de 1977 el IICA comenzó en Jamaica el proyecto "Estudio de Implementación de Agricultura en Zonas Montañosas" (proyecto Piloto-Allsides), con recursos del Fondo Simón Bolívar.

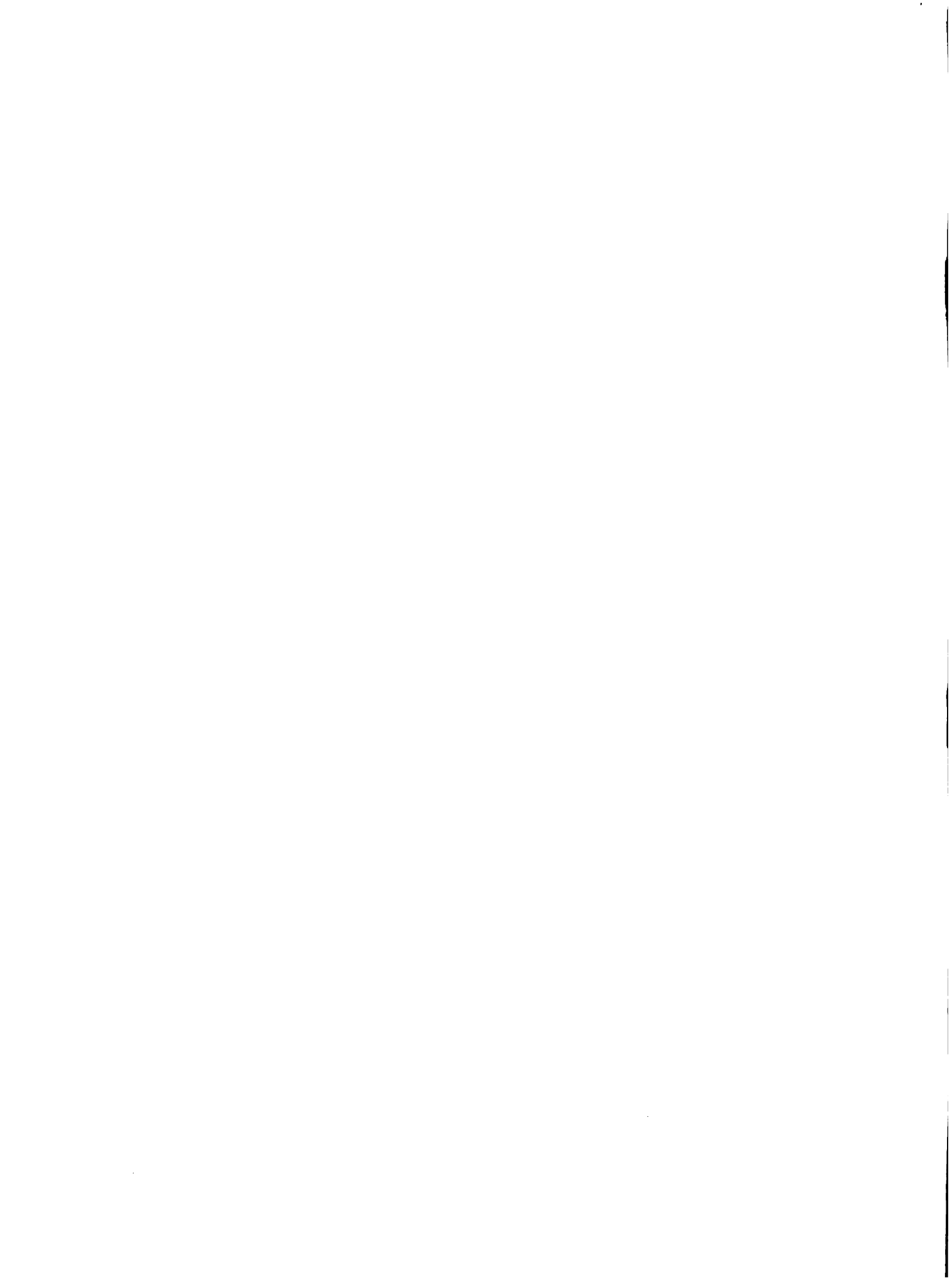
En Junio de 1980 se constituyó durante una semana en Jamaica un equipo integrado por técnicos de la Oficina en Kingston y de la Sede Central, a efectos de elaborar un dictamen de conclusiones y recomendaciones sobre esta experiencia en proceso.

El presente es el informe final del personal enviado desde la Sede Central para apoyar esta tarea.

Cabe destacar que, por visitas de personal de Sede en distintas funciones, este es uno de los proyectos del IICA con mayor densidad de informes y de opiniones por unidad de personal o de costos en terreno. La misión del equipo constituido en Jamaica en Junio de 1980 se facilitó así por la disponibilidad de análisis previos, aunque ellos no arrojaran siempre interpretaciones coincidentes.

Por lo expuesto, este Informe de Evaluación trata de resumir una visión ponderada que sirva al equipo de la Oficina en Jamaica para ajustar sus operaciones y al IICA para ordenar la discusión sobre un proyecto que arroja muchas enseñanzas sobre posibilidades y límites de la acción de cooperación técnica.

Los firmantes del presente resumen opinan que la evaluación de proyectos del IICA no puede generar fácilmente un indicador que sintetice el calificativo de "bueno" o "malo". Más bien corresponde explicitar logros y defectos, tan objetivamente como las posibilidades lo permitan, a efectos de extraer entre todos los interesados enseñanzas útiles para el futuro. Cualquier intento de calificar con más precisión tiende a ser inútil y, muy especialmente, sólo refleja apreciaciones altamente subjetivas.



El proyecto piloto Allside acusa características que lo hacen muy útil para el señalado propósito de extraer enseñanzas. A saber:

- el documento proyecto no indica claramente cuáles son responsabilidades de organismos nacionales y cuáles son responsabilidades del IICA, no obstante lo cual las partes han operado con un claro y mutuo reconocimiento de sus respectivas tareas.
- la Oficina y el proyecto FSB prácticamente nacieron y evolucionaron en conjunto, habiendo sido el proyecto el núcleo que permitió ganar credibilidad para la acción del IICA en Jamaica.
- la estrategia de fortalecimiento institucional seguida, bastante empleada en otros proyectos del FSB, pasa por una acción en terreno concreta del IICA, en torno a la cual se convoca al esfuerzo conjunto de organismos nacionales.

Como es usual en los Informes de Evaluación, al presente documento se le agregan varios anexos. Estos son:

- Anexo 1: Revisión del diseño del proyecto (preparado por la Dirección de Evaluación, con datos complementarios presentados por la Oficina en Jamaica).
- Anexo 2: Análisis de la vigencia actual de los objetivos del proyecto (preparado por la Oficina en Jamaica).
- Anexo 3: Análisis del progreso del proyecto y factores causales (preparado por la Oficina en Jamaica).

A estos tres anexos requeridos por las normas de evaluación, se agregan en esta ocasión:

- Anexo 4: Ayuda memoria preparada en Jamaica por el equipo conjunto de la Oficina y de la Sede Central.
- Anexo 5: Informe de viaje de Hugo E. Cohan.
- Anexo 6: Informe de viaje de Rufo Bazán.



II. PROYECTO DEL PAIS

2.1 Antecedentes

El proyecto GOJ/IICA/FSB no distingue entre proyecto país y proyecto IICA.

Pese a ello, está claro que Producción de Alimentos y Empleo Rural son objetivos primordiales para Jamaica y por ende, en todo proyecto rural del país.

El tema de objetivos de proyectos del país está cubierto en el Anexo 2 (particularmente en págs. 12 a 14). De los objetivos nacionales, identificados por el GOJ y el PANP del IICA en Jamaica, queda claro que hay aspiraciones de desarrollo rural a las que el IICA puede contribuir; entre ellas: el mejor conocimiento de posibilidades productivas en zonas de montaña.

2.2 Diseño

La parte del proyecto que se entendió correspondía al GOJ fue la de extensión y preparación de suelos.

Se debe reconocer, no obstante, que no hubo diseño específico para cumplir con estas secciones.

2.3 Objetivos y metas

Los objetivos y metas del proyecto en la parte que, no señalada explícitamente, correspondía al GOJ eran excesivamente ambiciosas.

Sin diseño específico ni compromiso orgánico para extensión ni preparación de suelos (y obras complementarias) no era fácil suponer que se lograrían las metas previstas, sobre todo ante un Gobierno que enfrentaba dificultades organizativas y presupuestarias.

La motivación del GOJ y la buena comunicación entre el IICA y organismos nacionales lograron en parte superar estos déficits, aunque a un nivel de equilibrio inferior al previsto en objetivos y metas.



2.4 Estrategia

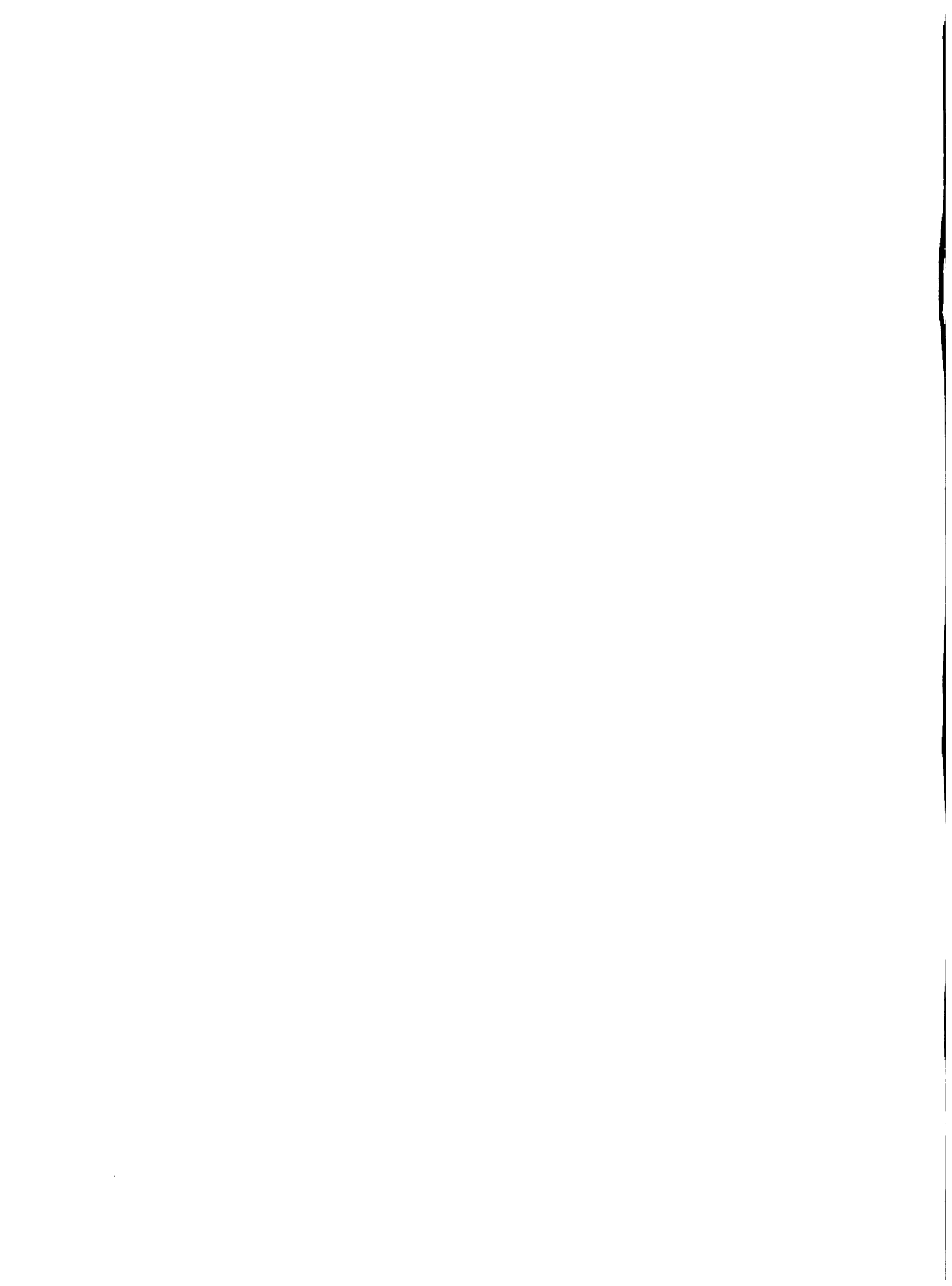
No había estrategia prevista para cumplir los compromisos nacionales.

la constitución de un Comité Coordinador entre IICA y organismos nacionales, con reuniones mensuales programadas o convocables según se requiera, ha probado ser un útil instrumento de la estrategia conjunta GOJ/IICA.

La estrategia implícita del Proyecto GOJ, ha sido reiteradamente criticada por personal de la Sece que visitó Jamaica, sobre la base de que un predio experimental es insuficiente para lograr grandes efectos en términos de bienestar de la población rural. Sin embargo, la estrategia de comenzar por demostrar la posibilidad de obtener resultados productivos puede concebirse como un enfoque útil. En vez de apuntarse al logro de todo lo deseable en un equilibrio ideal, se trata de provocar un desequilibrio que motive acciones complementarias, al producir expectativas, motive acciones complementarias.

La existencia de Allsides y del nuevo lote experimental en Olive River, con frecuentes visitas de funcionarios, técnicos y productores constituyen una clara estrategia de desequilibrio. En efecto, los visitantes pueden apreciar logros concretos y observar resultados que, previo al proyecto, no existían más que en la suposición de unos pocos. Esto provoca la necesidad por entender el por qué de la escasa difusión y buscar soluciones a esta nueva situación. Que el problema de extensión-adopción iba eventualmente a aparecer, pudo ser previsto por muchos. Y se previó en el Convenio, al asignarse responsabilidades en la materia. Sin embargo, hasta ahora -cuando las potencialidades son concretas- fue reducida la presión por atender ese aspecto del Convenio. Por diseño o por fuerza de los hechos, el proyecto nacional puede, entonces, llegar a conformarse, formalizarse y ser ejecutado gracias a una estrategia que provocó desequilibrio, al sobredesarrollar relativamente un tema.

Al respecto, cabe sugerir que la cooperación técnica internacional debe reconocer las dificultades de exigir enfoques equilibrados, los que implicarían atención balanceada a todos los factores concurrentes al éxito de un proyecto. En extremo, esto requiere de los países programar



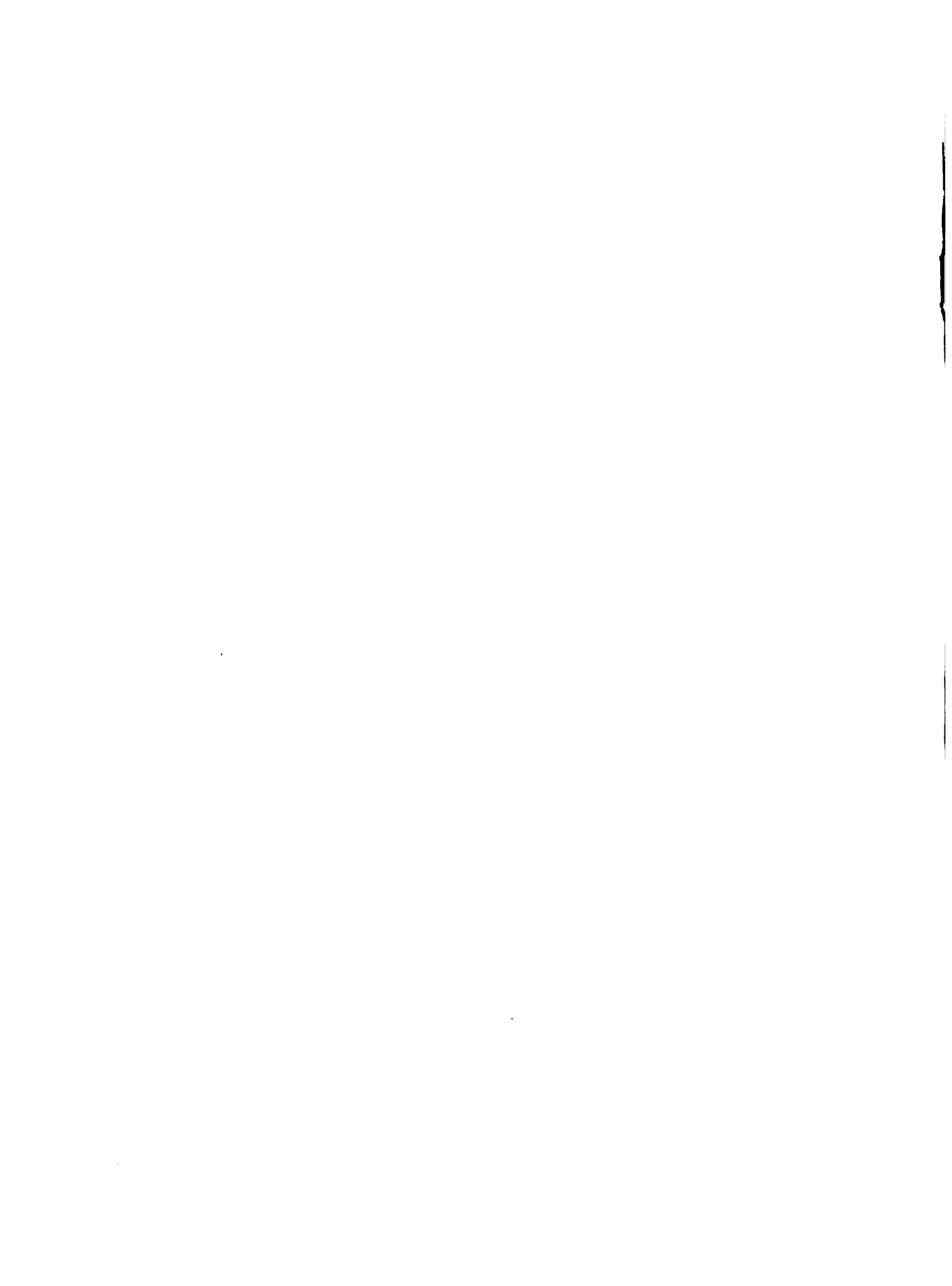
y ejecutar un desarrollo equilibrado. Esto no es fácil, probablemente no sea factible y no es obvio que sea indispensable como proceso. Para algunos autores el desequilibrio, en el sentido de ir tomando decisiones incrementales, creando nuevos problemas y remediándolos es la única descripción realista del proceso de decisión política y económica en todo el mundo. Para otros, más que única descripción razonable, se trata de la única norma de conducta recomendable; sobre todo para países con escasos recursos administrativos. Sea que se tome la versión descriptiva o la normativa, debe reconocerse que la no ejecución efectiva y orgánica de todo lo complementario, constituye una realidad en muchos países.

El IICA puede y debe insistir en la existencia de proyectos nacionales balanceados, en cuya formulación puede cooperar, para hacer más eficaz su contribución específica. Pero ello no siempre se logrará o, de lograrse, no debe esperarse una ejecución de alto nivel de eficacia en la consecución de todos los objetivos. Más aún, si formular y ejecutar estos proyectos nacionales fuera fácil, la necesidad de cooperación técnica sería o muy especializada y reducida o, directamente, nula.

Por lo expuesto, la visión equilibrada del desarrollo que implican nuestros enfoques sobre Planificación y Proyectos (nacionales y del IICA) se encuentran con una realidad, no sólo en Jamaica, en la que resalta como importante la opción de provocar un desequilibrio. Este desequilibrio, debiera responder a los siguientes criterios:

- provocarse en un tema de interés nacional,
- generarse en un tema para el que se pueda, en su momento, reunir la capacidad nacional para resolverlo, y
- existencia concreta de capacidad en el IICA tanto para contribuir a generarlo como para apoyar, a su turno, el establecimiento de otros equilibrios temporarios, a mayor nivel de performance social.

El proyecto IICA/FSB/Jamaica responde, por diseño o circunstancias, a esta concepción de desequilibrio. El tiempo, la acción de la Oficina y, sobre todo, la respuesta del GOJ señalarán si puede establecerse en algún momento esa deseada situación de mayor performance social.



2.5 Revisión del Proyecto

El proyecto país está aún sin definición formal y tienen necesidad de apoyo del Instituto.

2.6 Resultados

Autoridades y técnicos nacionales reconocen que se obtuvieron logros parciales, en relación a las metas previstas para cumplimiento del país en el proyecto conjunto.

2.7 Acción futura y estrategia

Varios proyectos nacionales, con diversos apoyos, están en distintas etapas de formulación y ejecución para agricultura en zonas montañosas.

Una impresión preliminar es que, en un marco de dificultades políticas, organizativas y presupuestarias, el GOJ se está esforzando por ordenar un proceso, en lo que el IICA debiera contribuir.

III. PROYECTO DEL IICA

3.1 Identificación del Problema y Beneficiarios

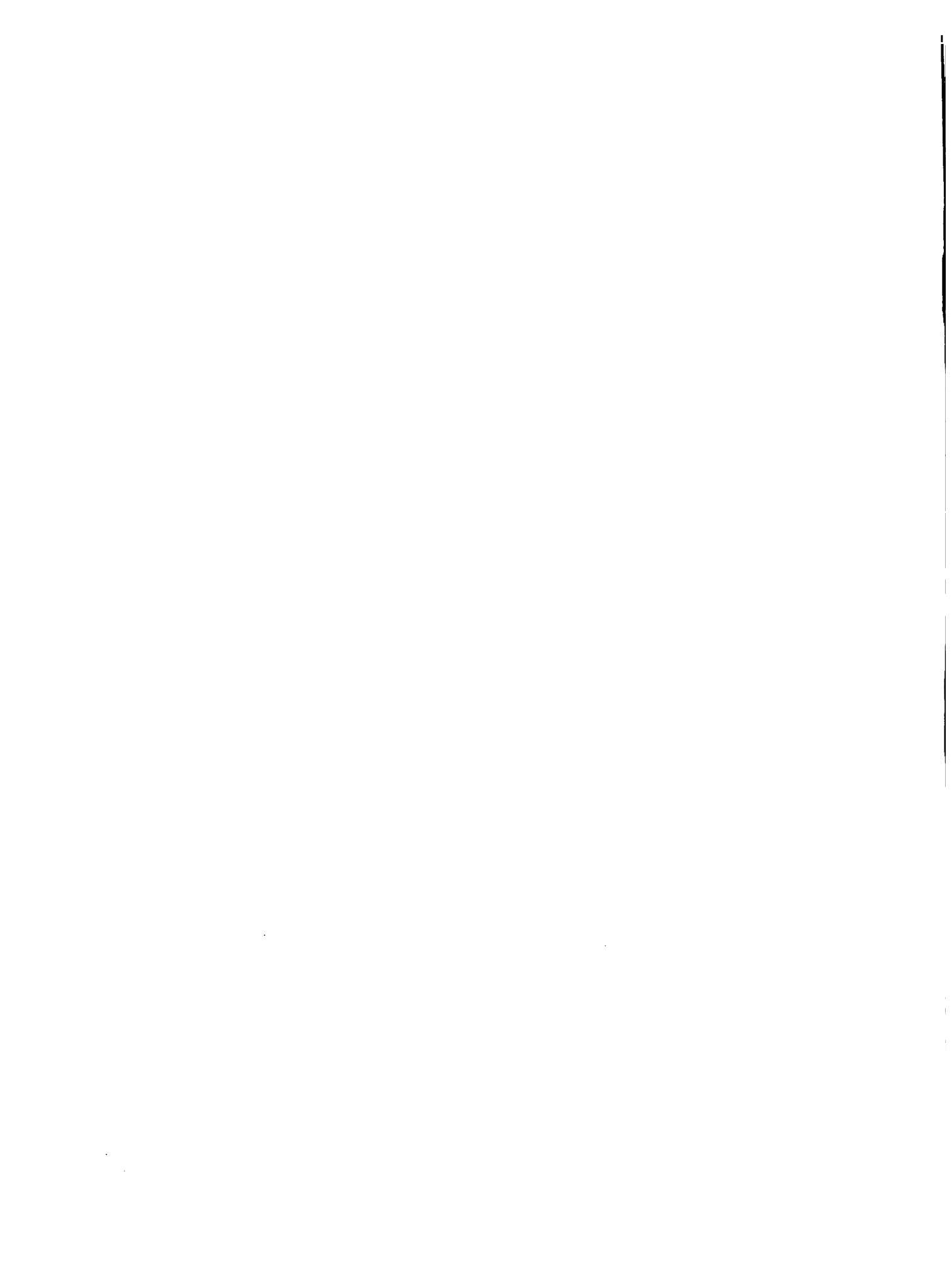
El problema al que se dirigió el proyecto del IICA es del tipo de "problema a resolverse para contribuir al logro de otros fines".

Sobre la base de:

- un problema de ingresos en unos 150.000 productores ubicados en suelos montañosos.
- que estos suelos cubren un 80% de la superficie del país.
- que los suelos están sujetos a erosión grave.
- que existía recomendación sobre terraceo para reducir erosión.
- que no existía conocimiento sobre prácticas de producción-conservación rentables.

el IICA se comprometió a una experiencia piloto para un área de 622 acres con unos 300 productores.

La parte prevista para el IICA fue la de explorar y probar existencia y rentabilidad de sistemas de producción sobre terrazas. Durante la evolución del proyecto se decidió, además, probar otros sistemas de conservación.



3.2 Objetivo general

To cooperate with national organization on:

- 1) The development of a body of knowledge on hillside farming and cropping systems conducive to change the traditional pattern of hilly land farming.
- 2) The spread of that body of knowledge throughout the pilot area.
- 3) Extending pilot area results to the whole hillside region.

De estos tres objetivos generales del proyecto conjunto, el IICA tomó sólo el primero como su responsabilidad.

3.3 Objetivos específicos

- a) To develop a new system of production based on multiple cropping and efficient utilization of land and water resources.
- b) To increase the productivity and production of certain food crops (yams, beans, potatoes, cassava, sweet potatoes).
- c) To increase food production, income, nutrition and improve the standard of living of approximately 300 farm families occupying about 622 acres of hilly land in the parish of Trelawny.
- d) To develop an institutional framework, capable of implementing similar changes in other areas of the country.
- e) To develop accurate production figures for crops grown by the small hill farmer.
- f) To train local professional technicians.

Nuevamente, se destaca que hubo acuerdo entre el IICA y el GOJ sobre la responsabilidad central del Gobierno en cumplimiento de los objetivos específicos c. y d.

3.4 Estrategia

La estrategia seguida por el proyecto IICA/FSB, tiene las siguientes



características genéricas:

- ejecución de acciones en terreno (conducción de ensayos y su análisis).
- fuerte coordinación con organismos nacionales (un Comité Coordinador y frecuentes contactos personales)
- demostración y discusión de resultados con productores, técnicos y jefes.
- integración con todos los otros proyectos de la Oficina del IICA en Jamaica.

Como resumen de la estrategia de fortalecimiento institucional, el modelo seguido implica demostrar aptitud para hacer en terreno, divulgar resultados y, a partir de la aptitud demostrada con resultados en terreno, apoyar la constitución de la capacidad nacional de programación y ejecución.

3.5 Acciones realizadas y logros del proyecto

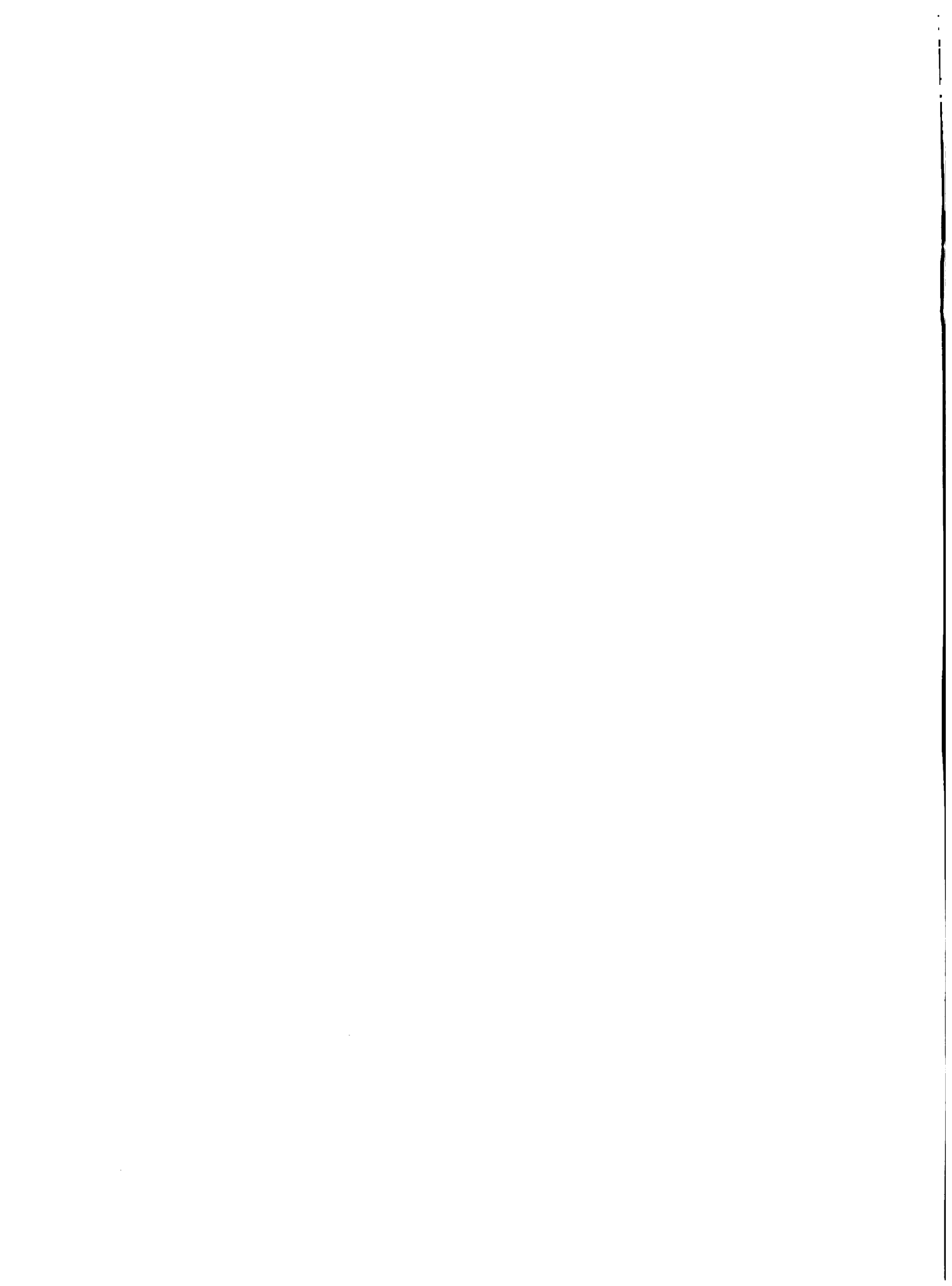
3.5.a. Principales acciones

El proyecto realizó en Allsides investigaciones pragmáticas de sistemas de producción sobre terrazas, conforme a lo convenido con el GOJ.

Las investigaciones se califican como pragmáticas porque, aún cuando en un comienzo se limitaron a parcelas pequeñas (15 a 30 m² c/u), se desecharon rápidamente -sin profunda indagación sobre causas o soluciones de problemas- los cultivos que no arrojaron resultados satisfactorios.

Los sistemas retenidos después de 3 años (nueve sistemas) se están probando en parcelas más realistas (405 m²) y se prevé implementarlos en predios de productores.

En 1980 comenzaron en otro sitio (Olive River) experimentos sobre otras prácticas de conservación (montículos individuales, al estilo prevaleciente entre los productores de zonas de montaña, montículos individuales en bancada y continuos en bancada, fajas de contención con pastos). Los cultivos en prueba son "yam" y yam con papas.



En base a los resultados obtenidos y en proceso, en ambos sitios, se organizó un intenso programa de visitas de técnicos y productores, así como de cursos breves.

Estos resultados se obtuvieron con la erogación presupuestaria detallada en el Cuadro 1.

CUADRO 1

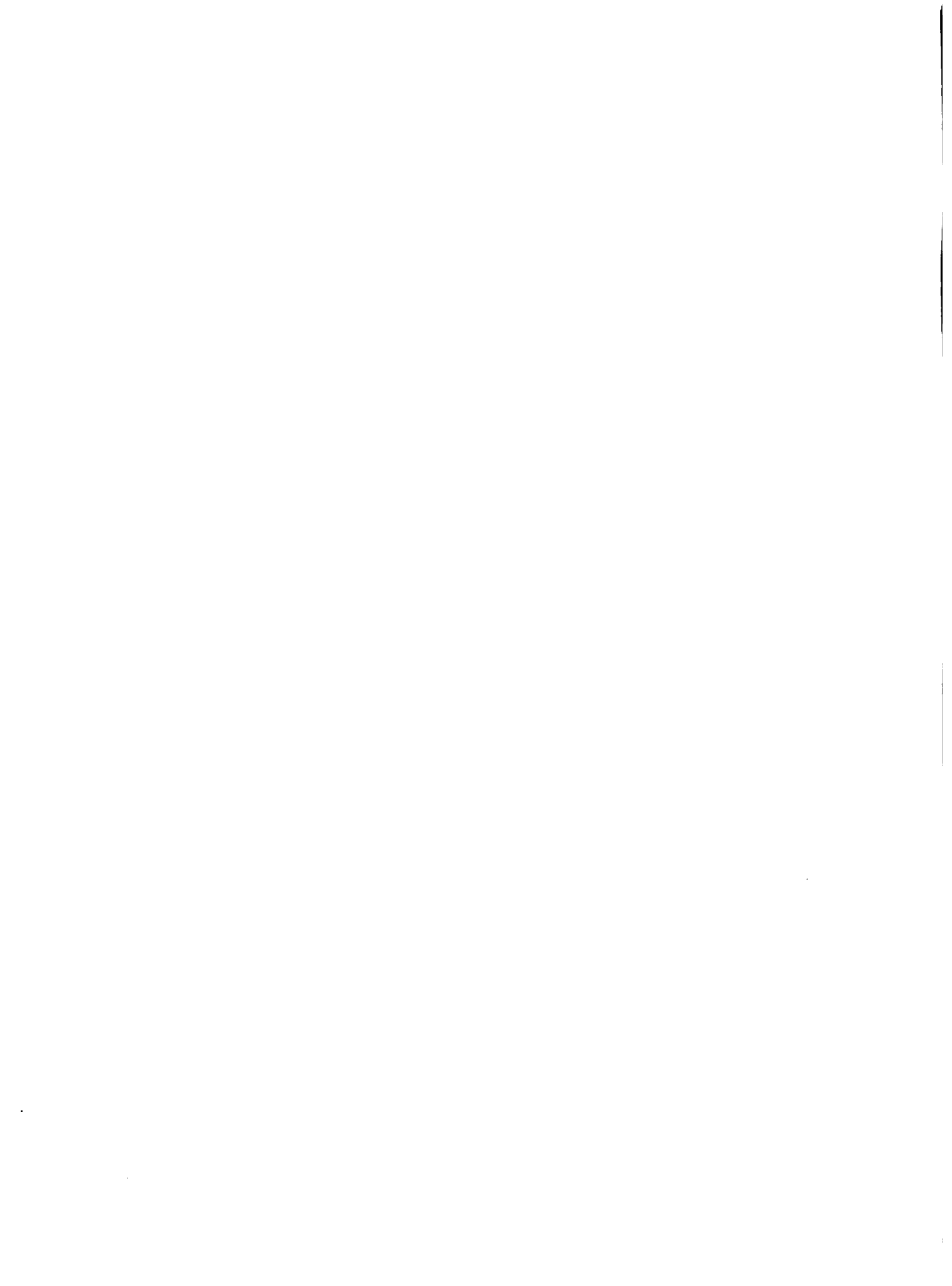
Erogaciones Presupuestarias del Proyecto IICA/FSB/Jamaica
(en miles de US\$ redondeados al 100 más próximo)

Ejercicio	1967/77	1977/78	1978/79	2º Semest. 1979	En/Ab. 1980	TOTAL
Personal	—	20,8	26,0	29,1	18,7	94,6
Operaciones	9,8	32,2	34,6	20,7	5,7	103,0
Equipo	8,0	4,3	—	4,0	—	16,3
Serv. Grales	1	5,0	11,5	5,4	3,1	26
	18,8	62,3	72,1	59,2	27,5	239,9

3.5.b. Principales logros

Los principales logros del proyecto se resumen en:

- conocimiento, antes no disponible, sobre sistemas rentables de producción en zonas de montañas en Jamaica, con atención a un uso eficiente del suelo y del agua.
- creación de la inquietud por difundir los sistemas, a través de días de campo (con unas 1000 visitas de productores), cursos de 6 semanas a estudiantes, periódicas visitas y seminarios para técnicos de todo el país.
- propuesta de la expansión del área meta, como experiencia piloto ampliada, mediante un proyecto que financiaría el BID (preparado con fuerte apoyo del IICA).
- aplicación de los sistemas de Allsides en predios experimentales del GOJ, en Smithfield y Sweetwater.



- difusión de las ideas básicas de sistemas de producción a otros proyectos del GOJ, con diferentes fuentes de asistencia técnica y financiera internacional.
- reconocimiento por la acción del IICA y buena voluntad para con el Instituto por parte de oficiales de medio y alto nivel del GOJ.
- crecimiento de la Oficina del IICA con proyectos complementarios que integran un aporte conjunto útil al proceso de desarrollo rural en Jamaica.

IV. CONCLUSIONES

Tal como se indicó en la Introducción, las conclusiones que se presentan a continuación tratan de rescatar un aporte útil para la Oficina de Jamaica, para el Fondo Simón Bolívar y para el Instituto en su conjunto.

4.1 Sobre la vigencia del proyecto y del problema país

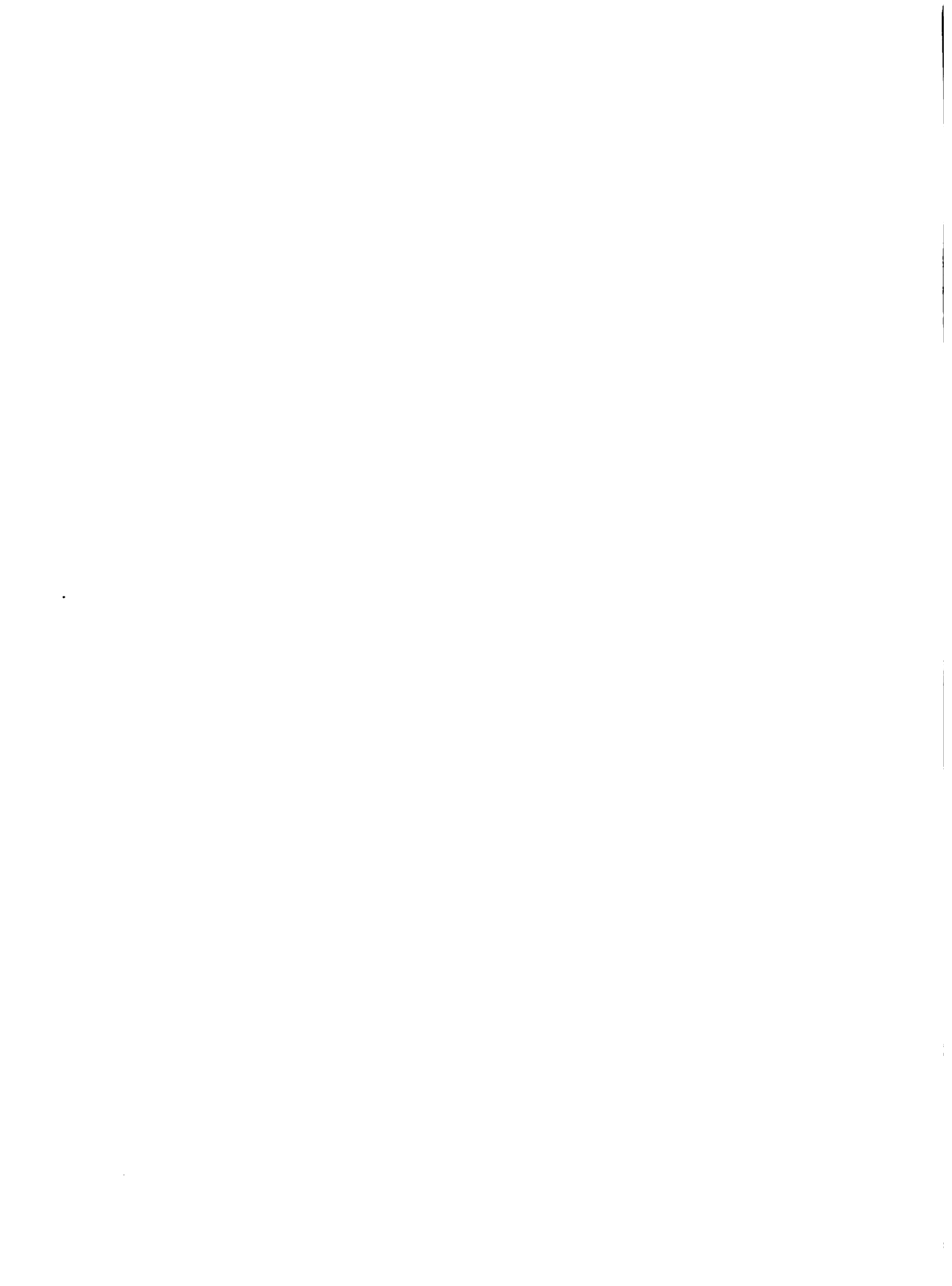
El país continúa y continuará durante tiempo, teniendo serios problemas de desarrollo rural. La creación, adaptación y difusión de conocimientos sobre conservación y manejo de suelos en montaña siguen y seguirán siendo problema importante.

El proyecto del país, que no existe formalmente, debiera resultar en una programación orgánica de las numerosas acciones que (aún en el reducido tema de manejo de suelos) están emprendiéndose en todo el territorio.

4.2 Sobre la vigencia del problema y objetivos del IICA

La creación de conocimientos sobre sistemas rentables es una acción en principio nunca acabable. Por lo tanto, hay vigencia para el problema y los objetivos del proyecto IICA/FSB.

No obstante ello, la misma naturaleza no agotable del proceso emprendido sugiere que se consideren prioridades.



En particular, se señala que (ver Anexos 4, 5 y 6) pudiera ser de interés:

- probar la estabilidad de sistemas, para productores con condiciones no adecuadas para rotar;
- extender pruebas y análisis de resultados a otros tipos de suelos;
- programar la transferencia de los experimentos al Gobierno con propuesta de un plan de trabajo.
- organizar investigaciones y pruebas piloto, en extensión-adopción, equivalentes a lo hecho en el área de pruebas de sistemas productivos.

4.3 Impacto del Proyecto del IICA

Ya se ha cubierto en el punto 3.5.b. lo que se estima son los principales logros del proyecto.

El impacto de estos logros, medido en términos de adopción de los sistemas, es difícil de precisar y no da la impresión de ser importante.

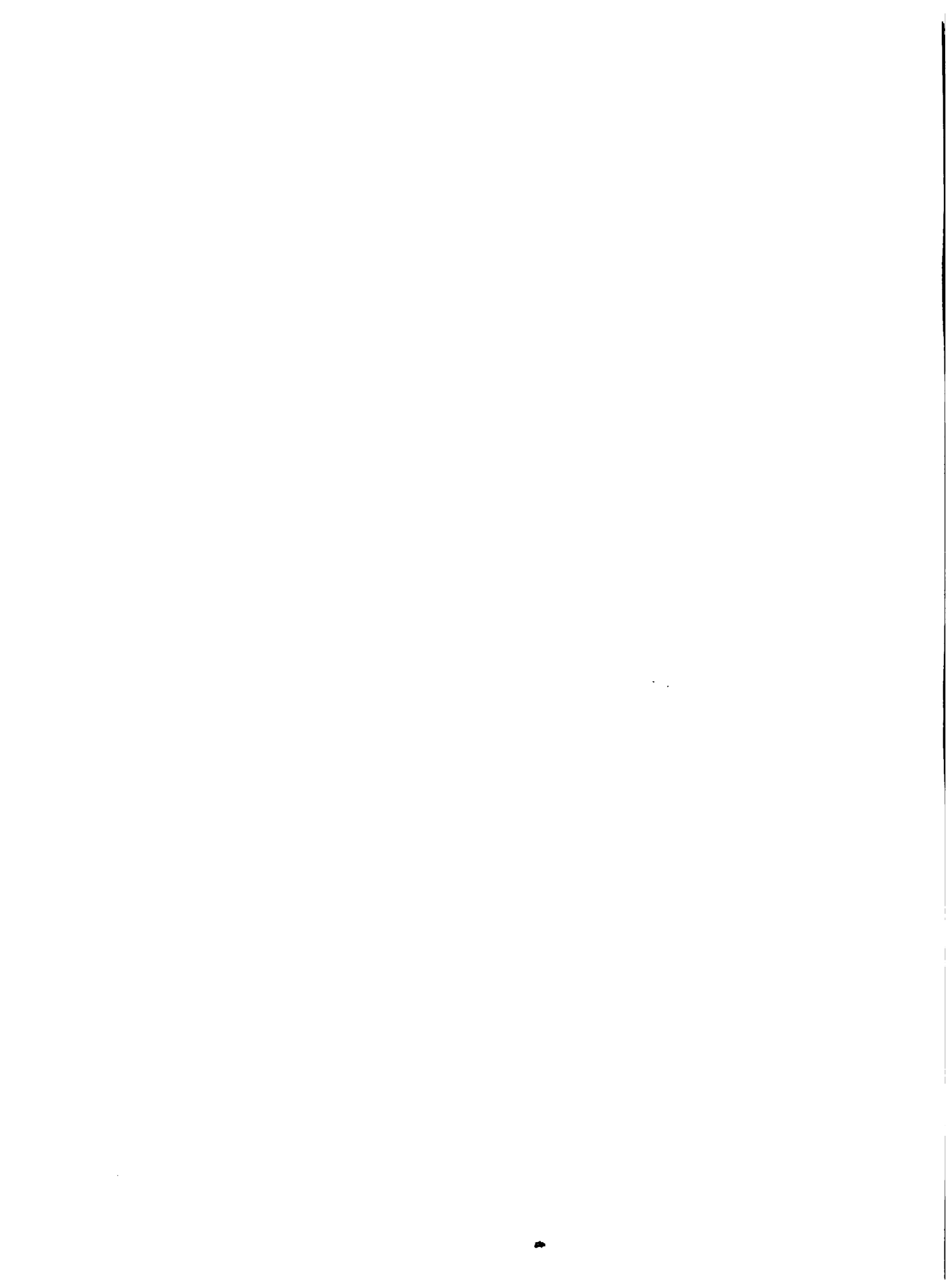
Sólo pueden identificarse unos 20 productores con algún tipo de adopción.

Para explicar este aparente déficit, debe reconocerse que:

- recién se están obteniendo conocimientos difundibles, y
- la tarea de extensión, a cargo del GOJ, no ha sido satisfactoria. En particular: ha habido poco esfuerzo, alta rotación de personal (4 técnicos en tres años) y continua reorganización de los respectivos servicios.

4.4 Importancia de la solución del problema para el país y el IICA.

No puede sobreenfatizarse la importancia que tendría para Jamaica la difusión de sistemas de manejo racionales y rentables entre sus productores de zona montañosa.



Claramente, no obstante esta importancia, la difusión de una agricultura con uso racional de los recursos naturales y humanos disponibles, requiere mucho más que la disponibilidad de tecnología. Estos requisitos exceden incluso al montaje de un servicio de extensión, en tanto jugarán otros múltiples factores (desde disponibilidad de insumos a política de precios). De esta limitación son conscientes tanto el GOJ como el equipo del IICA/FSB.

Como queda indicado en el punto 2.4 (Estrategia) de este informe, con la cooperación del IICA el GOJ ha generado un desequilibrio, al producir pruebas de la viabilidad de sistemas superiores a los preexistentes. El proyecto no prevé mecanismos para establecer nuevos equilibrios a mejores niveles de ingreso para los productores.

Otras acciones del GOJ, algunas de ellas con cooperación del IICA, están intentando el proceso que sería un verdadero desarrollo rural. El IICA ha ganado credibilidad y aceptación para cooperar en esto. Sin embargo, una acción relativamente integrada del GOJ requeriría recursos técnicos y financieros muy superiores a los asignables a la Oficina y se observa la creciente participación de otros organismos de asistencia internacional, en ocasiones bilaterales.

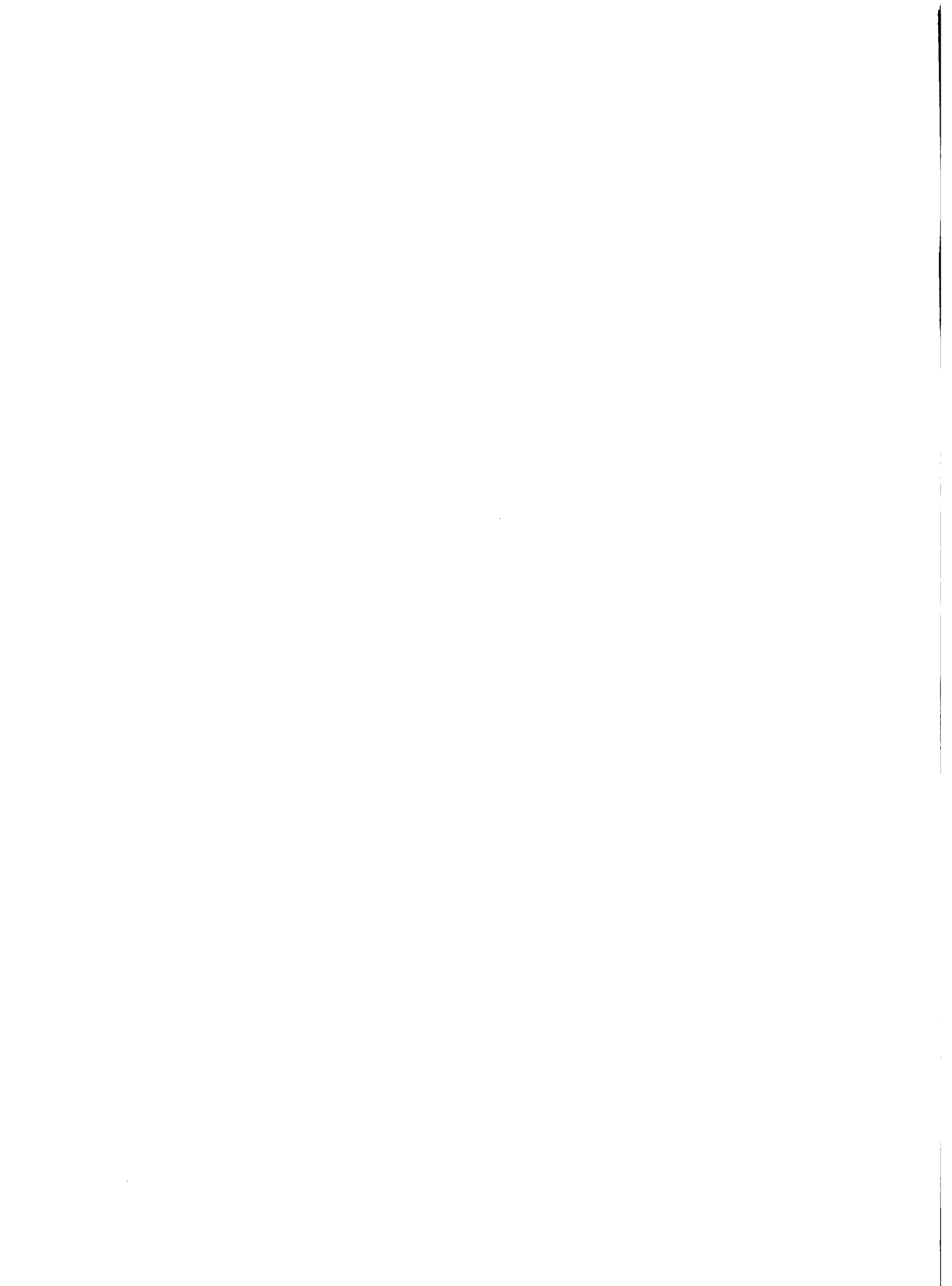
4.5 Conclusiones en relación al diseño del proyecto

Sin perjuicio de algunos comentarios técnicos (ver punto 4.2 y anexo 6)* se estima que el proyecto fue bien diseñado, en función de los recursos disponibles. Lo logrado en tres años es prueba de ello. A su vez, lo que no se intentó refleja prudente reconocimiento de las limitaciones de una Oficina nueva, poco conocida en el país y con escasos recursos.

4.6 Apreciación sobre la eficiencia de la estrategia adoptada

Se considera muy eficiente haber dedicado los recursos disponibles a la generación de un producto concreto, que permite identificar el aporte del IICA en Jamaica.

* Algo que la propia naturaleza pragmática y urgente de las investigaciones no permitió prever, puede considerarse para el futuro: apoyo de centros tales como el CATIE y el CIP en profundización de causas y soluciones a algunos problemas detectados en cultivos.



El desequilibrio creado es de magnitud razonable, en relación a las posibilidades del GOJ para difundir los sistemas, lo que no basta para garantizar el logro de los meta-objetivos del proyecto.

Al presente, se estima que el IICA, por demostrar capacidad, ha ganado más que el Gobierno, al que le queda una difícil tarea.

4.7 Fortalecimiento de las Instituciones

La cantidad de proyectos con apoyo internacional diverso que se han emprendido o previsto* sobre temas del proyecto IICA/FSB, sugiere que los organismos nacionales de contraparte se han fortalecido.

No queda duda de que, en efecto, estos proyectos y el reconocimiento de lo logrado con participación directa del IICA, han mejorado la percepción que las autoridades tienen sobre los respectivos organismos.

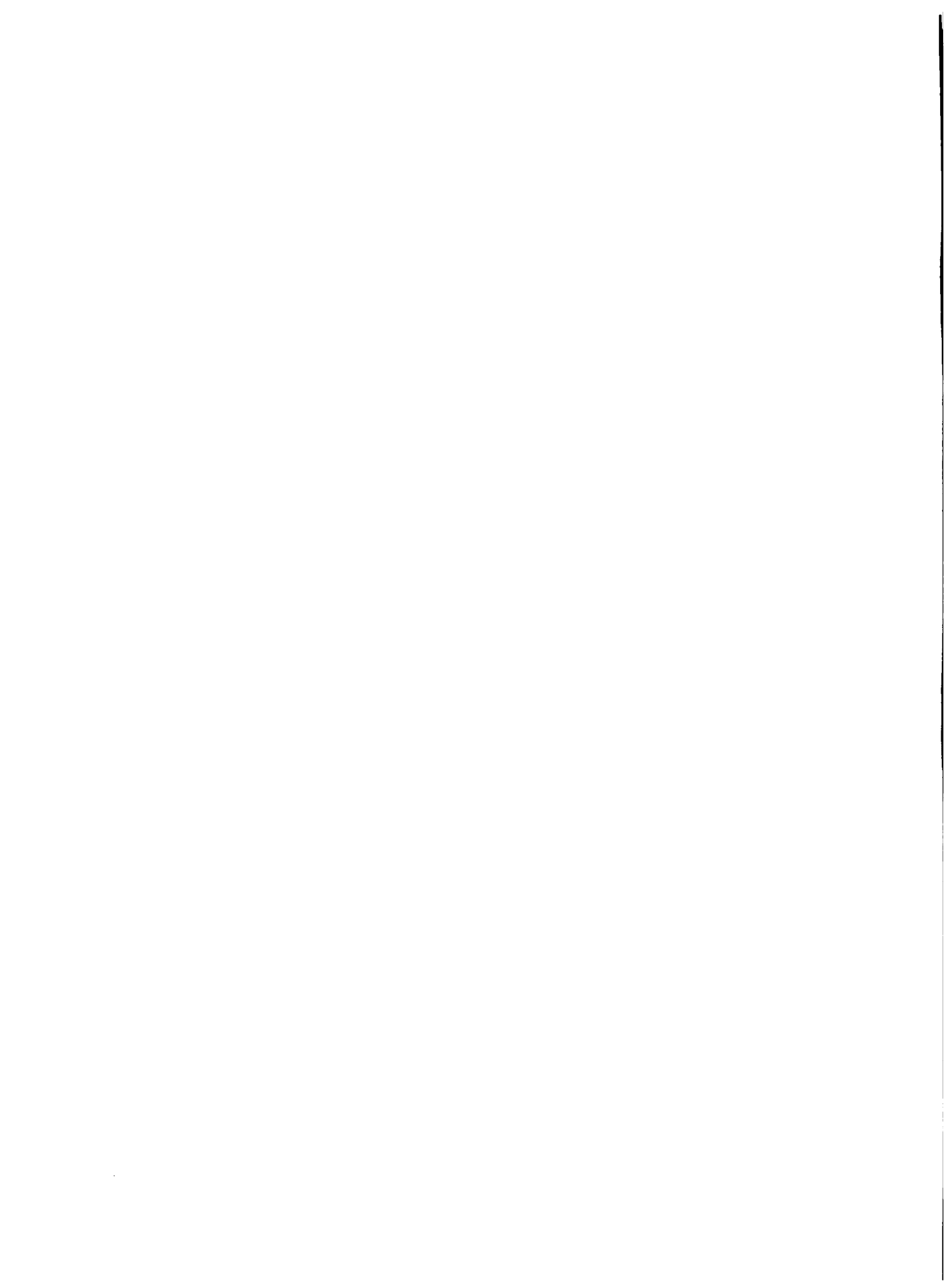
Sin embargo, la difícil situación presupuestaria del sector público, la escasa certeza de cómo lograr una adopción masiva de los sistemas, o de parte relevante de ellos, y la propia magnitud de proyectos de apoyo (en relación a la capacidad nacional de absorción) generan dudas de cuál será en definitiva el nuevo equilibrio productivo de los organismos públicos sectoriales.

El fortalecimiento de organismos, en atención a algún concepto de cuál sería el producto institucional deseable de ellos en la situación previsible para Jamaica en los próximos años, no fue ni es tema del proyecto IICA/FSB.

4.8 Situación en cuanto a la asignación de recursos humanos y económicos del Proyecto.

El proyecto del IICA/FSB continuará hasta fines de 1981 y no se ha detectado ningún problema serio de asignación de recursos.

* GOJ/USAID Rural Integrated Development Project, GOJ/IDB/IICA Pilot Hillside Agricultural Project (PHILAGRIP), GOJ/FAO/Norway Hillside Project, the proposed Venezuelan/GOJ/IICA Peanut Project (VENAPEPOJ).



4.9 Factores internos y externos que afectan la marcha del proyecto

4.9.a Factores internos del proyecto

Aparte de sugerencias menores ya discutidas (y ampliadas en el Anexo 6), sólo cabe reconocer el esfuerzo y la calidad del trabajo del Director y de los técnicos de la Oficina en Jamaica.

El personal del IICA ha trabajado muy bien tanto en los aspectos técnicos del FSB como en la integración de otros proyectos de la Oficina y en la vinculación con organismos nacionales.

Un aspecto que merece atención en cuanto a factores internos, no del proyecto en sí sino de la relación entre personal de Sede y personal en terreno, se refiere a la frecuente emisión de opiniones opuestas de personal con sede en San José en cuanto a la importancia y calidad del proyecto Allsides.

El inevitable componente de subjetividad que tiene el evaluar un proyecto en cualquiera de sus etapas puede resultar, y ha resultado en este caso, en un continuo factor de irritación. Al emitirse opiniones sin metodología uniforme, al verificarse profundas diferencias entre estas opiniones y, sobre todo, al no llegarse a ninguna conclusión homogénea, el personal en terreno no tiene más certeza sobre su acción que la que surge de su propia convicción. Y esta convicción está sujeta a una continua emisión de comentarios externos con mucho de aleatorio.

Conforme consta en los Documentos de Evaluación preparados por la Oficina de Jamaica (ver especialmente Anexo 2, p.21 y Anexo 3 ps. 13 y 24) este inconveniente no se limitó en Allsides a opiniones desconcertantes sino que produjo consultores con resultados no satisfactorios para el proyecto, e intentó cambiar unilateralmente los objetivos del Convenio.

La Oficina en Jamaica ofreció amplias oportunidades de discusión, incluyendo un Seminario efectuado en San José, a principios de 1980, lo que no bastó para que el personal de Sede Central definiera una opinión y recomendaciones homogéneas.

4.9.b Factores externos del proyecto

Como factores externos que afectan, negativamente, la evolución del proyecto sólo cabe reiterar o ampliar aspectos ya señalados a lo largo de este informe. En particular

- dificultades reconocidas por el propio personal nacional, para cumplir los compromisos del GOJ.
- limitaciones a la adopción, producto de sistemas inseguros de tenencia, dificultades de comercialización y de acceso al crédito* edad modal de productores y, en general, los frenos a la adopción tan comunes en todos los países en vías de desarrollo. Esto se complica ante un esquema que implica fuertes alteraciones sobre prácticas prevalecientes.

V. RECOMENDACIONES

5.1 Sobre la continuación del Proyecto IICA

La continuación del proyecto hasta fines de 1981 ya está acordada. Esto parece suficiente para lograr los objetivos en curso.

5.2 Cambios que se recomiendan para la adecuación del proyecto

5.2.a Objetivos y metas

Se sugiere enfatizar recomendaciones para los productores, iniciar una evaluación detallada de resultados, comenzar pruebas de estabilidad de sistemas y programar la transferencia al GOJ.

5.2.b Estrategia

La estrategia debería enfatizar las necesidades de transferencia, tanto de los resultados generados (a los productores) como del proyecto en sí mismo (al Gobierno).

* Se estima que un 80% de los productores son morosos en algún plan de crédito, lo que los hace difícilmente elegibles en nuevos esquemas.

Parte de las tareas debieran dedicarse a analizar si se propondrá un nuevo proyecto para cubrir mayores alternativas ecológicas, en función de los comentarios sobre variabilidad de suelos-pluviometría hechos por R. Bazán (ver Anexo 6) o si se prefiere iniciar un proyecto sobre el tema de transferencia-adopción.

A su vez, como otra alternativa a explorarse, pudiera hacerse un intento de amarrar un proyecto para cooperar en la integración de la programación de acciones sobre agricultura de montaña en Jamaica, en un plazo del orden de seis meses a un año.

Estas recomendaciones se presentan al sólo efecto de sugerir estrategias que hacen tanto al proyecto, a año y medio de su terminación, como al actuar de toda la Oficina. Es de esperar que la exitosa integración de acciones Oficina-FSB, hasta ahora lograda, continúe durante el proceso de explorar si y, en su caso, para qué se propondrá un nuevo FSB.

5.2.c Impacto institucional

A lograr ésto deben dirigirse actividades que persigan el objetivo de lograr la transferencia del proyecto al país, y eventualmente, la cooperación en la reorganización del enfoque nacional sobre agricultura de montaña.

Programar y promover la transferencia al país del proyecto IICA aparece como tarea importante del tiempo restante en el actual FSB. La cooperación en algo institucional más amplio, como sería el apoyo al GOJ para organizar su programa nacional, requeriría refuerzos a la Oficina. Para esto pudiera explorarse un FSB de breve duración.

5.2.d Ajustes de recursos

No se prevé ninguna necesidad importante en la materia, en relación al proyecto.

Se recomienda que la Oficina cubra su vacante en Extensión, al menos por un plazo breve pero suficiente para explorar un proyecto en la materia. Para esto se sugiere no enfatizar un enfoque

tradicional de venta de tecnología disponible, si no -más bien- alguien capaz de comprender los sistemas (whole farm systems) vigentes y su inserción en los sistemas de mayor nivel que, en conjunto, definirán si habrá adopción y cómo lograrlo.

5.2.e Sobre eliminación de factores internos que afectan negativamente al proyecto.

No se detectaron factores internos negativos del proyecto en sí mismo.

En cuanto a los problemas de relación San José-Oficina, identificados en este informe, parece relevante sugerir que:

- a) el personal de la Sede Central homogenice criterios en base a los cuales emitirá opiniones. Esto daría un marco más manejable para procesar subjetividades,
- b) las opiniones de personal de Sede, en base a todo el debate y la franca discusión previa que se requieran, presente una visión única al personal en terreno.
- c) el proceso de visitas no resulte en meras opiniones inconsecuentes, sino en recomendaciones específicas de acción correctiva, en su caso, y
- d) toda crítica y propuesta de revisión profunda se haga con participación abierta del personal en terreno.

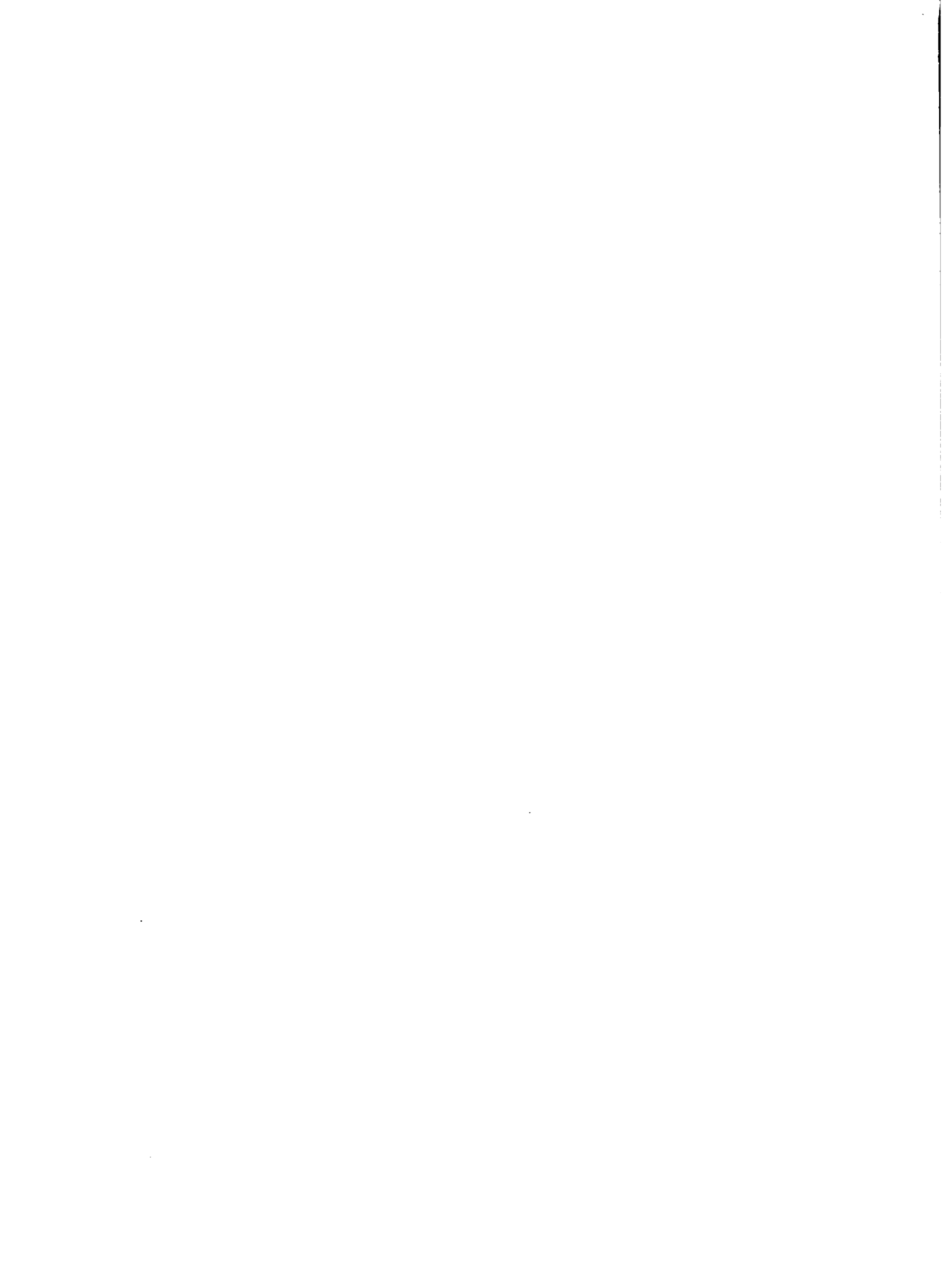
El proyecto Allsides ofrece una excelente oportunidad de discusión útil para la acción futura del IICA.

En cuanto a factores negativos externos al proyecto en sí y a las relaciones Sede-Oficina, ellos existen en cantidad. Se trata, en este caso, de los múltiples elementos que inciden sobre las dificultades para mejorar el ingreso de los productores. Y son factores que no se eliminarán fácilmente. Algunas ideas de proyectos ya sugeridas en este Informe pueden contribuir a que el GOJ identifique estas causas con precisión y actúe para aliviar restricciones.



5.8.f Recomendación sobre otros proyectos de la Oficina

La integración observada en la Oficina de Jamaica, hace innecesario ir más allá de los comentarios y sugerencias presentados en este Informe. Cabe reiterar (ver Anexo 4 -punto 5.4.4) la conveniencia de que la Oficina continúe en proyectos y acciones consistentes con Agricultura de Montaña. En este sentido, preocupa que los intensos esfuerzos hechos por la Oficina y la obvia aceptación que ha ganado en Jamaica, puedan diluirse por la existencia de fuertes proyectos de otros organismos en el tema.



1.1 National problem

1.1.1 What, specifically, are the key country problems indicators?

Jamaica has traditionally been an agricultural country. Out of the two million eight hundred thousand acres (1,134,000 Ha) which form the country it has been calculated that eighty percent (80%) is mountainous. In this area-hillside agriculture is practised. At present hillside agriculture utilizes inappropriate technologies that cause and increase soil erosion.

The agricultural Census of 1968 states that of a total of 190,582 farms in the country 149,703 have areas of less than 5 acres (2,02 ha.). This represents 78,6 percent of all the farms in the country. The majority of these farms are located in the mountainous area of the country where hillside agriculture is practised.

Due to the fact that land under hillside farming has been losing considerable quantities of soil annually (loss of 54 tons of soil per year per acre recorded on the Smithfield Project), the Government of Jamaica, has launched a program of soil conservation. IICA's help was requested to provide adequate farming technology for newly terraced lands.

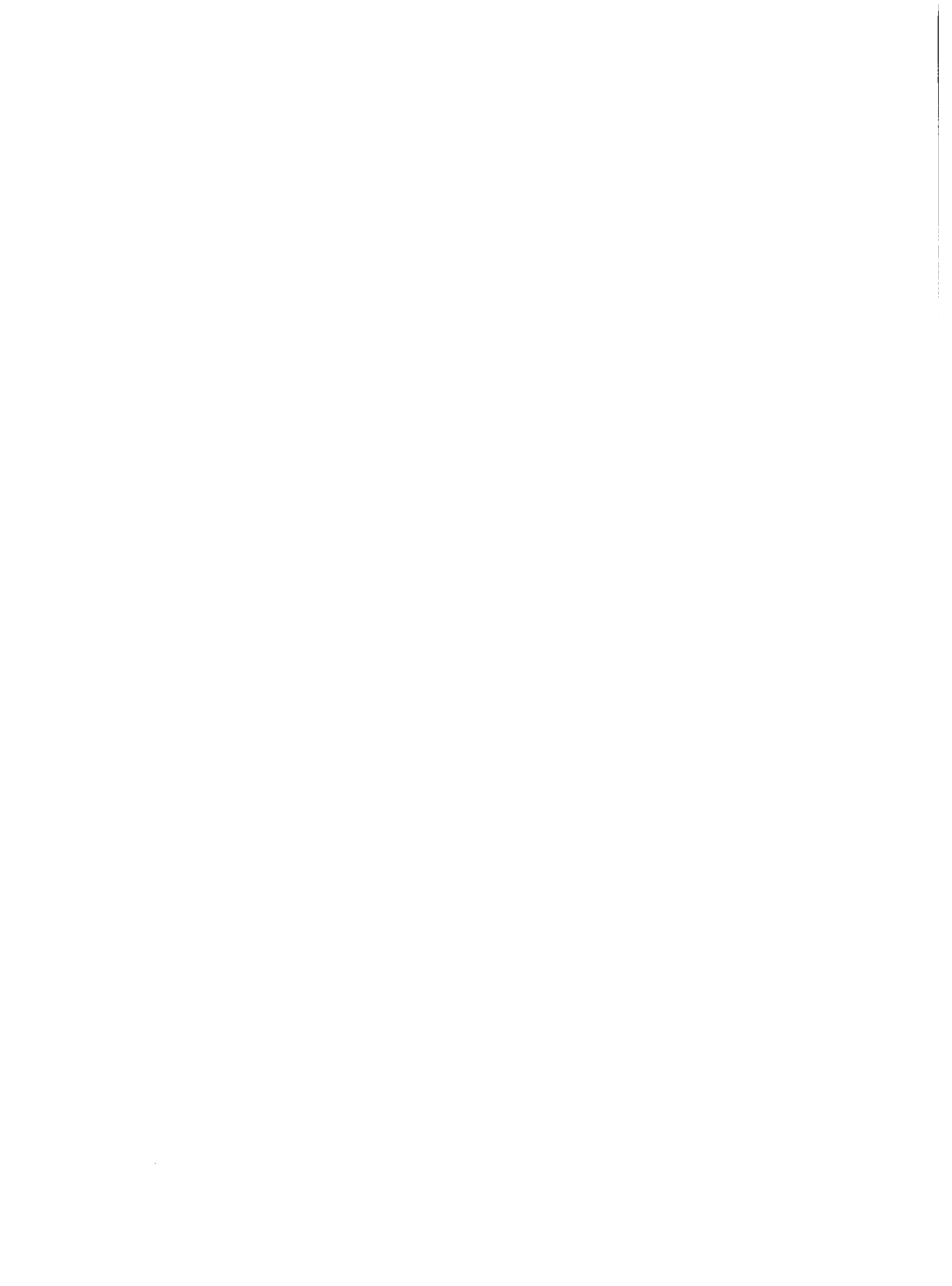
1.1.2 What is the magnitude of these problems?

There is high rural unemployment (estimated to be over 30%) in the country, and rural annual incomes are quite low (in many instances less than J\$400 per person). This has increased the level of rural urban migration. Rural farm labor is culturally undesirable and considered of low status. It is hoped to develop improved farming hillside, technique to enable use so as to increase farm incomes and ultimately raise the standard of living for small farmers in Jamaica. It is also important to note that the average age of the minifundia hillside farmers is over fifty years.

1.1.3 How serious are these problems? Who would benefit (or be harmed) if solved?

Direct beneficiaries are the small hillside farmers.

1.1.4 Are these problems in their own right, or are they only constraints to attaining other ends?



Jamaica es una pequeña isla con recursos naturales muy limitados y una creciente población que presiona sobre todos (el área es de 1.2 millones de hectáreas), la población es de aproximadamente dos millones, 176 personas por Km², y con un crecimiento de población estimado en 2.5%-3%. La Agricultura, que en 1974 contribuía con el 7.8% del total del producto doméstico bruto y empleaba un promedio del 35% del total de trabajadores, representa un área vital de la actividad económica.

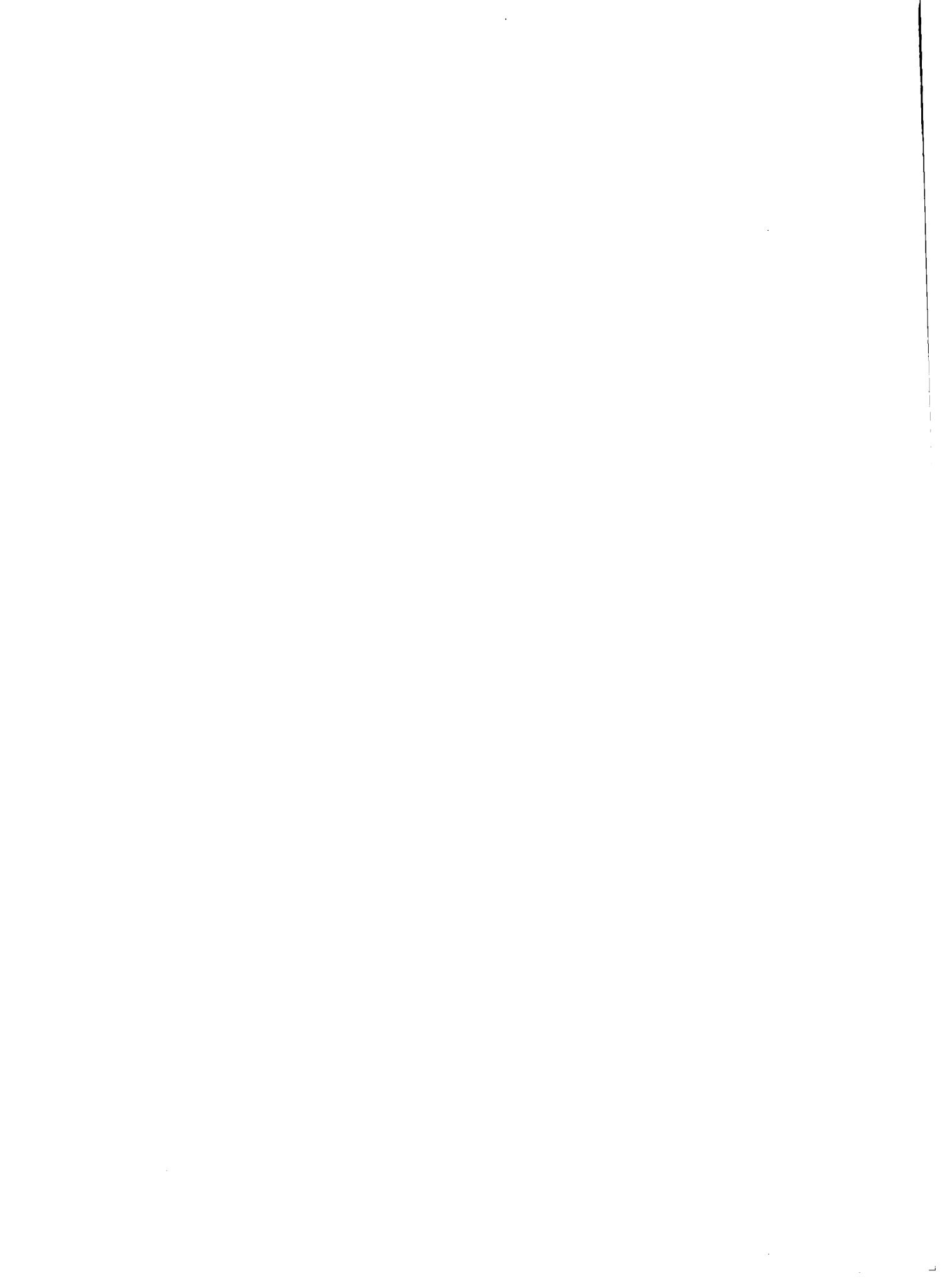
El Gobierno, en años recientes, ha enfatizado firmemente la importancia de la agricultura en la alimentación de la población y en mejorar las normas de nutrición en términos de cantidad y calidad. (El total de alimentos agrícolas importados ha subido más rápidamente en los años recientes que el total de exportaciones agrícolas). En busca de la política de mayor confianza en la producción de alimentos también han sido emitidas políticas para dar atención especial al desarrollo de recursos físicos y humanos y a la adopción de medidas para desarrollar tierras adicionales así como para incrementar la eficiencia de sus usos.

En un país, donde el crecimiento de la población (1976=2 millones; 1980=2,169 millones) está causando una alarmante reducción en el área per cápita de la tierra disponible para la agricultura y donde el 80% del terreno es montañoso o escarpado, dichas políticas resaltan urgentes necesidades.

1.1.5 What is being (or has been) done to resolve these problems?

Principal actions:

- After Independence in 1962 Government (GOJ) escalated the programme of land acquisition for the settlement mainly of small farmers. This programme was based on a freehold system. Since 1972, however, the programme of acquisition has been further intensified, but the emphasis has been placed on leasehold tenure.
- In 1969 GOJ increased the number of Land Authorities (LA) from two thirteen to cover all of Jamaica. These LAs, while dealing with agriculture in general, had as a major function the developmental potential of soil and water resources, particularly in the interest of small farmers.
- Since 1972 GOJ reinforced the Soil Conservation Division with the assistance of studies made by FAO. This was the beginning of a national programme of soil conservation.
- At present the GOJ is planing emphasis on improving the technique for intensive food production on hillside land. However, there is limited trained capacity in the country to conduct research for determining appropriate systems of food production for hillside farming, and for developing the technology for extension to small farmers.



- In recognition of this IICA's assistance was sought by GOJ to develop production systems for newly terraces lands in the Allside area (the F.S.B. Project).

Concurrent Planned Actions:

- GOJ, with the assistance of IICA, has already initiated operations similar to those adopted at Allsides in other demonstration centres in Jamaica.
- USAID/GOJ have initiated a \$26.5 million 5-year project, designed, inter alia, to increase production and productivity in the Pindars - Two Meetings area of the country. This project is titled Integrated Rural Development Project."
- IDB/GOJ/IICA are considering a pre-feasibility study for a proposed "Pilot Allside Agricultural Project"(PHILAGRIP). It is expected that this study will be followed by a \$2.5 million (pilot-cumfeasibility) study to be funded by IDB, and for which IICA will provide technical inputs.

1.1.6 Is there a carefully planned and explained set of national institutional actions which could approximate a conventional definition of a national project?

An ambitious national programme has already been launched by the Ministry of Agriculture, Agro-Forestry and Soil Conservation.

The Allsides Agricultural Development Project (FSB) is conceived as a second phase of the national programme which foresees the utilisation of the rehabilitated areas through the development of an efficient commercial farming based on the following:

1. Increased productivity and production of food crops in the area of the project.
2. The development of appropriate farming systems on these treated areas (IICA-FSB).
3. Transferring the technology to private farmers with accent on the small hill farmer. (GOJ-MINAG).

1.2 Analysis of national institutions

1.2.1 Which national institutions are responsible for actions oriented toward resolving national problems?



Basically the Soil Conservation Division MINAG and other Divisions of this Ministry.

1.2.2 What responsibility does each institution have and how does it carry it out?

The Soil Conservation Unit. This Unit is the "counterpart" institution to IICA in the project. A few years ago GOJ indicated its intention to launch a national programme of soil conservation. This programme of soil conservation, coupled with the normative target for food production, caused MINAG, Jamaica, to request IICA's assistance in developing systems of production for newly terraced lands.

IICA has been providing training opportunities for technicians of the Agricultural Research Division. MINAG is interested in repeating work done at Allsides in other parts of the island under different physical and climatic conditions. This will lead to a build-up of technology which will have wider application.

MINAG's training units have been cooperating with IICA on a number of projects. Accordingly, IICA has executed a number of projects. Accordingly, IICA has executed a number of training courses in Hillside systems of production for research Extension and production staff and has programmed additional ones to accommodate the increasing number of staff who should be exposed to this training.

The Production Unit of MINAG (new Production and Extension) was created specifically to promote increased food production as part of the Emergency Production Plan Initiated in 1977. GOJ had been undertaking a programme of restructuring of the Ministry of Agriculture and with effect from mid-1977 most services in Agriculture had become decentralized and regionalized. It now appears that the Production Unit has become a permanent feature and that in addition it has engulfed many important divisions of the Ministry. MINAG's new structure is composed of three groups: Production and Extension, Personnel (includes training) and Research and Development (4 research stations including outreach services).

Country-wise there is a strong interest in the technologies already developed and others expected for improved hillside farming, especially with a view to intensifying food production of hillside lands through a judicious mix of appropriate technology and land utilization.

1.2.3 What are the pertinent characteristics of the national institutions involved in the IICA project, in terms of:

MINAG is working along the lines of the GOJ with priorities in food production and rural development. There is a good body of technicians, working with reasonable leadership and well defined programs. Yet, the financial problems of the GOJ a rather recent change in structure and frequent turnover of personnel have limited its goal achievement.

1.2.4 Where are the weaknesses or limitations in each institution?

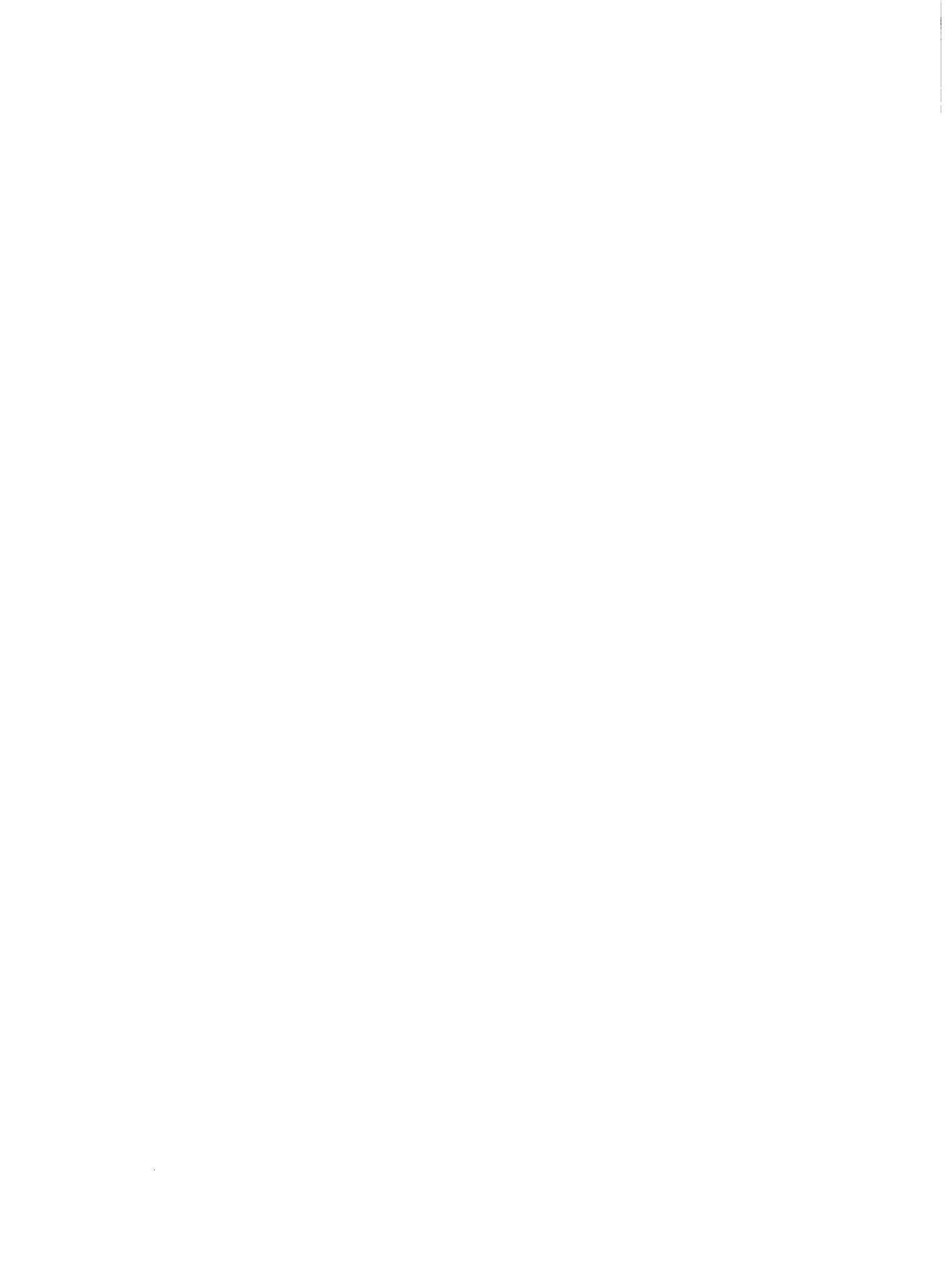
En la etapa de planeamiento inicial se reconoció que el Ministerio de Agricultura, la agencia de principal actividad en el sector agrícola, poseía una capacidad limitada para planear y llevar a cabo dicho programa. Este impedimento era de mayor significación, cuando en ese tiempo se apreciaba que el gobierno estaba contemplando una mayor escala de proyectos para la conservación de la tierra y estaba en busca activa de ayuda técnica y financiera de agencias internacionales (FAO) y bilaterales (USAID, NORAD) para mejorar esta capacidad y llevar a cabo la planeada.

Es difícil para el éxito a largo plazo del programa iniciado y desarrollado, la disponibilidad de tecnología apropiada para el cultivo de la tierra y para sus condiciones variantes y su extensión entre los pequeños agricultores. Esto es en términos de continuo mejoramiento de tierra y conservación de agua y de producción económica substancialmente mayor.

Las agencias que operaron fueron la División de Conservación de Tierras (para la ejecución del trabajo para la conservación de la tierra) y los Servicios de Investigación y Extensión Agrícola (para el desarrollo y transmisión de tecnología).

Con respecto al tratamiento dado a la conservación de suelo, la División de Conservación de Tierras que fue creada en consecuencia del Proyecto UNDP/FAO/GOJ para la conservación de tierras y el manejo de cuencias, desarrollado y llevado a cabo desde hace varios años, era pequeña y con poco personal. (El personal consistía de tres profesionales y menos de 10 técnicos que asistían). La organización para la producción y transmisión de la tecnología, el sistema de investigación y expansión estaba incompleto, carecía de coordinación adecuada y era relativamente ineficiente. Y eran estas las cosas que cualesquiera agencia de asistencia técnica tendría que encarar en la ejecución del trabajo de conservación de tierra y en el desarrollo y transmisión de la tecnología mejorada.

En el tiempo en que el Proyecto del "FSB" se conoció, ya se planeaba la reorganización de servicios a la agricultura nacional. Esto ha tenido como objetivo "interalia", el fortalecimiento del servicio de conservación de tierras, aumentando su número de fuerza y entrenando profesionales adicionales.



Sin embargo, se sabía que la reorganización del sistema de investigación agrícola, el cual ha debido efectuarse al mismo tiempo, parecía que iba a ser dilatada por un año más. Esto era para facilitar la formulación final, la revisión y la realización de los acuerdos sobre las propuestas preparadas por la misión de la FAO/IDB-CP para la reorganización y fortalecimiento del sistema de desarrollo y extensión agrícola en Jamaica.

También se debe reconocer que el Proyecto FAO/UNDP/GOJ de manejo de tierra y cuencas en el oeste de Jamaica, al cual se le hizo referencia anteriormente, inició una serie de actividades en la conservación de tierra y manejo de cuenca, para desarrollar y demostrar métodos de trabajo y técnicos para la conservación de tierra en el cultivo de ladera y examinar su posibilidad. Este nuevo proyecto, prevee cubrir 43.000 has. de tierra de ladera en nueve localizaciones.

1.2.5 Which institutions are assigned priority and why?

The Soil Conservation Division, MINAG

Other groups providing complementary inputs would be the others with extension responsibilities:

- the Research and Development Division
- the Production and Extension Division
- the Personnel (training) Division

1.2.6 What actions would contribute to relaxing the key constraints to institutional action for resolving national problems?

- Extension Services
- Marketing
- Credit
- Legal (tenancy) solutions

1.3 The objectives and goals of the IICA project

1.3.1 Do the project's objectives and goals reflect the nature and magnitude of the institutional problems to be resolved?

General objective:

To assist the Soil Conservation Unit of the Ministry of Agriculture to improve and to consolidate measures for developing appropriate technology for extension to users of newly terraced lands and lands which have been subjected to other types of soil conservation methods.

The specific objectives were defined in the 1976 Agreement with the Ministry of Agriculture as follows:

Specific Objectives

a) Programming

- i) To develop a new system of production based on multiple cropping and efficient utilization of land and water resources.
- ii) To increase the productivity and production of certain food crops (yams, beans, potatoes, cassava, sweet potatoes).
- iii) To increase food production and farm income, improve nutrition and the standard of living of approximately 300 farm families occupying about 622 acres of hilly land in the parish of Trelawny.

b) Management

- i) To develop an institutional framework capable of implementing similar changes in other areas of the country.
- ii) To develop accurate production figures for crops grown by the small hill farmer.

c) Extension

- i) To train local professional technicians.

It is to be noted that the agreement did not clearly specify the responsibilities for different objectives and goals since it has both the National and IICA's project.

The basic idea, though, was clearly understood by both parties: IICA's-F.S.B. project was to test and develop production systems.

1.3.2 Do the project objectives and goals fit within the framework of IICA's programs and Line of Action?

Yes, they do fit an Line III, although they only include the technology creation portion of IICA's programs.

1.3.3 Do the project objectives and goals clearly identify the institutions to be supported?



Yes, see 1.3.1.

1.3.4 Are the objectives and goals stated in terms so as to facilitate an adequate quantification of the pertinent accomplishments?

The final product of the joint project is:

1. The development of a body of knowledge on hillside farming and cropping systems conducive to change the traditional pattern of hilly land farming.
2. The development of an institutional infrastructure capable of implementing similar changes in other areas of the country.
3. The improvement of the standard of living of the families living in Allsides due to increases in food production and income (Ja. \$1,500.00 instead of Ja.\$670.00 at the project).
4. The establishment of new cropping systems on 335.95 acres.
5. The complete rehabilitation and efficient management of 622 acres in the Allsides area occupied by 300 farm families through:

- Completion of:

- a. 335.95 acres of soil conservation
- b. 335.95 acres of waterways
- c. 200,00 acres of gully control

Again, it is to be noted that the IICA-FSB project is to be responsible solely for product number 1.

1.4 A project workplan as part of the strategy

1.4.1 Is the project strategy compatible with IICA's general strategy for its technical cooperation program?

Yes, it is.

Yet it is to be recognized that the institutional approach is understood in this project to require actual IICA's work in the field, as a proof of its capability and a demonstration to national institutions of how to do things. The participation of these institutions is assured through permanent contacts, including formal periodic meetings. Trial plots will be established over the 3-year period on 3-acre plots on which ten (10) systems are being tested and replicated. A number

of different crops are being used in a multi-cropping system.

Target 2.

- Similar trials will be done in other hilly areas of Jamaica.
- Training will be provided to technicians from the Division of Research and Extension of MINAG, firstly to replicate the experiments and then to extend the technology which ensues.
- Strong links will be developed between the offices of the Soil Conservation Division, the Regional Director, the Parish Manager, the Extension Division and the Agricultural Research Division. A coordinating mechanism will be created and strengthened at MINAG.
- At the local level, a social organization will be promoted to perpetuate to the advantage of farmers the technology developed, and in conjunction an appropriate socio-economic survey of the project area will be undertaken.
- Technology which has a potential for success will be demonstrated to farmers as it evolves.

Target 4.

- The targets for transferring technology and procedures for land reclamation are worked jointly with MINAG and are subject to constraints. Extra effort will be made to ensure the joint involvement of the Soil Conservation Division, the Extension Division, Research Division, Production Unit and IICA.

Target 5.

- Targets determined jointly by IICA and MINAG (see comments at 4 above).
- Extension will be involved to a great extent if progress is to be assured.
- The strategy is to plan the dissemination of results from the pilot area for use in all hillside farming areas of Jamaica.

1.4.2 Which was the most outstanding project action in the past?

The land provided by MINAG in 1977/78 for research of systems of

production for newly terraced lands was three (3) acres. In 1978/79 MINAG promised additional lands for use as a testing site for conservation methods other than terracing. For various reasons (un-authorized settlement of identified plots by squatters, unsuitability due to inappropriate slope categories, distance from the Allsides project itself and inaccessibility) sites suggested by MINAG could not be used. Further efforts by IICA to obtain lands under the control of MINAG resulted in inspection of other proposed sites.

Eventually, a new site (Olive River) was obtained and systems of soil conservation are already being experimented.

In 1977-78 GOJ completed the construction of a building containing three offices, two storage rooms, one water tank and complementary facilities on the site of the project. Subsequently, one of the offices was converted to a 6-bed dormitory to accommodate the Jamaica School of Agricultura (JSA) final year students for whom special short courses (three weeks) One periodically arranged under IICA's supervision. Additional storage space was constructed by MINAG.

- During 1977-78 a total of 489 technicians was reached: through visits at Allsides.
- from July 1978 through January 1979, 300 persons participated in on-the-site demonstrations. This figure does not include many individuals and small groups who have visited the demonstration site from time to time.

In 1977-78 ten systems of production were tested at Allsides.

Ancillary trials on soil fertility using the micro-plot technique were also conducted.

In 1978-79 the four top performing mixes were repeated on a semi-commercial scale. In addition, there were six other production systems being tested. Further, research on cropping systems was initiated at two other watersheds (

1977-78: Liming trials
fertility trials
staking trials (yams)
animal component data
in-service training

1978-79: liming trials (cont.)
fertility trials (cont.)
animal component data
peanut trials
bean germplasm trials
in-service training

1977-78: All trials were made at Allsides

1978-79: Trials were expanded to Smithfield and Sweetwater

1977-78: 628 farmers attended field days

1978-79: About 300 farmers have been reached up to January 31st. (field days).

Using traditional farming methods, farmers on average earn \$670 per year. Results of the first crop cycle of the production systems trials of 1977/78 indicated that with appropriate technology and under the conditions which are found at Allsides, the Jamaican hillside farmer can obtain a net income of Ja.\$2,000 per acre per year. This result is being retested during the 1978/79 crop to see at what levels these incomes would stabilize, since there could be some reduction in moving from experimental to commercial operations.

Other potentially superior income earning crops such as peanuts and ginger are being included in systems which are being tested in 1978/79.

1980: The production systems are being tested on alternative soil conservation systems at Olive River.

1.4.3 What activities were programmed for the past year?

1979-80:

IV.XLJ-111 Fourth year establishment and maintenance of observation and demonstration plots on systems best adapted to hillside agriculture.

- IV.XLJ-112 Establishment of demonstration plots for farming systems located with soil conservation methods other than bench terracing.
- IV.XLJ-113 Demonstrating the viability of promising farming systems on selected farmers holdings within the project development area; strengthening the role of extension.
- IV.XLJ-114 Continued reinforcement of the operative units at Allsides in the areas of hillside farming technology programming, coordination and management.
- IV.XLJ-115 Reinforcement of expertise in the areas of soil conservation and watershed management.
- IV.XLJ-116 Evolving systems for obtaining data and information on Agrosocio-economic indicators of hillside farmers.
- IV.XLJ-117 Entomological study of the area of Allsides

1.4.4 When were these activities carried out?

- IV.XLJ-111 Jul 79 - Jun 80
- IV.XLJ-112 Jul 79 - Jun 80
- IV.XLJ-113 Jul 79 - Jun 80
- IV.XLJ-114 Jul 79 - Jun 80
- IV.XLJ-115 Jul 79 - Jun 80
- IV.XLJ-116 Jul 79 - Jun 80
- IV.XLJ-117 March 80 - Jun 80
- IV.XLJ-118 Jan 80 - Jun 80

1.4.5 What resources were allocated for the different activities?

(budget, man/years or man/months, type of technical personnel, physical resources, etc.)

Costos de Operación	111	112	113	114	115	116	117
Viajes Oficiales	800	1.500	300	500	600	500	500
Literatura técnica	200	100					100
Edic. de Public.	1.000	200	100		100	200	300
Distrib. de Public.							
Becas	600		2.000	200	300		
Consult.y Conf.	300			300	400	300	500
Mater. y Utiles	1.500	2.000	1.000	400	1.400	400	400
Otros Servicios	400	400	350	100	300	200	100
T O T A L E S :	4.800	4.200	3.750	1.500	3.100	1.600	1.900

1.4.6 What was the technical nature of these activities?
(i.e.: in training, in what area and at what level)

IV.XLJ.11 See specific objectives - Programming

IV.XLJ.112 It will consist of establishment and maintenance of co-opping systems (demonstration plots) on lands which have received soil conservation treatment other than terracing

IV.XLJ.113 It will consist of establishment of viable farming systems on portions of selected farmer's holdings within the Allsides area.

IV.XLJ.114 This activity will hold field days for national technicians of the region, the parish and Ministry office, as well as to visit the Allsides station.

IV.XLJ.115 Under a tree partite arrangement between MINAG/IICA/Government of south Korea a Korean expert in soil conservation and watershed will be jointly sponsored.

IV.XLJ.116 It will consist of complementary and open-ended interviews with farmers in order to obtain wider, clearer and more accurate knowledge of the value orientations and farmers' receptivity.

IV.XLJ.117 This activity is aimed at identifying, listing, describing, and cataloguing pests and diseases affecting cropping systems and other crops.

1.4.7 What role was planned for the participation of personnel from national institutions in these activities?

This information is not available.

1.4.8 How would the intermediate and final products of activities contribute to and support the work of national institutions?

This information is not available.

1.4.9 Why were these activities selected as a means of attaining project objectives? (i.e.: the impact on institutions).

This information is not available.

1.4.10 Were changes made over the past three years in the workplan? (if so, what and why).

This information is not available.

1.5 Project organization

1.5.1 Who has overall responsibility for the IICA project?

IICA's Office director in Jamaica.

1.5.2 What authority does he have with respect to:

- a) Modifications in the nature of project activities (this can only be done with MINAG's agreement)
- b) The use of consultants for the project, as agreed with MINAG and depending on approval at central head quarter.

c) Obtaining and deploying physical resources.

In all these cases, he can only make proposals to the Director of the FSB subject to prior agreement with MINAG.

1.5.3. Who has responsibility for specific IICA project activities?

Primarily A.M. Wahab

1.5.4. What is their authority with respect to:

- a) The nature of project activities (as indicated in 1.5.2.)
- b) Personnel from national institutions (no authority)
- c) The use of FSB resources on project activities (free, on the basis of Manual Operative Programs approved by FSB's Director)

1.5.5. What internal communications systems are used to monitor progress and coordinate project activities?

Weekly meetings of IICA's staff. Monthly regular meeting with National coordinating committee, which can be called to special meetings, on needed, by IICA's Director in Jamaica.

1.6. Working relationships with national institutions with whom IICA project staff should related?

1.6.1. Who are the key individuals in national institutions with whom IICA project staff should related?

Soil conservation, MINAG's division in Kingston or in the field.

1.6.2. How often and how are these contacts made?

As often as needed.

1.6.3. Is there a clear understanding between IICA and national institutions staff as to the purpose of these relationships?

The understanding is clear. All operational problems are freely discussed and solutions cooperatively sought.

1. Review of Changes in National Problems

1.1. The performance of the Agricultural Sector in Jamaica over the past five years has been characterized by continuing low level of production, especially of food. A reversal of this position is crucial since this would result in:

- i) Increased employment and incomes.
- ii) Improvement in the standard of living including the nutritional levels of the people.
- iii) Generation of financing for new investments; as well as
- iv) Import substitution and the saving/earning of foreign exchange.

1.2. Despite specific efforts to accelerate project preparation in agriculture, the implementation and execution phases have been continuously hampered by frequent institutional changes and overlapping responsibilities of the various entities. This problem was recognized by the Government of Jamaica (GOJ) as can be observed in the following official policy papers 1/:

1. "An Overview of Jamaican Agriculture"
Agricultural Planning Unit, February 4, 1972
2. "Background Information on Land and Livestock Development"
Agricultural Planning Unit, February 20, 1973
3. "Green Paper on Agricultura - Agricultural Development Strategy"
K.A. Munn, Minister of Agriculture, November 21, 1973
4. "Emergency Production Plan"
Ministry of Agriculture of Jamaica, 1977
5. "Five Year Plan 1978 - 1983"
Ministry of Agriculture of Jamaica, 1978

1/ IICA/Jamaica Publication N° IV-7
"Agriculture - Government Policy Papers for Jamaica", February 1978

1.3. There is a proliferation of International Agencies engaged in various forms of assistance to the Agricultural Sector. This assistance is focussed principally on export-oriented crops viz., banana, coffee, cocoa, sugar cane and spices. The above-mentioned assistance does not address itself to the solution of food for domestic consumption and the alleviation of high levels of unemployment and low standards of living.

1.4 Failure to solve the chronic problems which have resulted in inadequate food production has resulted in frequent food shortages accompanied by drastically increased cost of living over the past five years.

1.5 The most recent Agricultural Census data were provided by the Department of Statistics in 1968/69.^{1/} The land distribution statistics are as set out below:

Land Distribution (1968/69)	Number of Farms	Farmland
	(%)	(%)
0 - 4.9 acres	78.8	14.9
5 - 24.9 acres	19.0	22.1
25 - 99.9 acres	1.6	8.2
100 - 249.9 acres	0.4	9.9
250+ acres	0.2	44.9

However, since then there have been several national exercises in the redistribution of land which would have affected this distribution, particularly with respect to increasing the number of small farmers. The figures for the 1979 Census are not yet available.

1.6 The main land characteristics of the island country of Jamaica is that 80% of the land is on slopes having greater than 5%, with 33% of the land falling within slopes of 20 - 50% and steeper.^{2/} The country is divided into 33 principal watersheds.^{3/} These watersheds have

^{1/} Statistical Yearbook of Jamaica 1978, Department of Statistics, March 1979 p. 459

^{2/} The National Atlas of Jamaica 1971, p.8

^{3/} IICA/Jamaica Publication N° 111-1

Stennett, H.R. "Watershed of Jamaica and Considerations for an Ordinal Scale of their Development", July 1979.

progressively deteriorated over the years because of soil erosion and improper management.

1.7 The GOJ in cognizance of the:

- i) Inadequacy of supplies of domestically grown crops for home consumption;
- ii) mountainous characteristics of the island;
- iii) high concentration (80% of all farmers) of small farmers on the hillsides;
- iv) state of erosion of the hillside farmlands;
- v) disparity in income distribution between the rural and urban population; and
- vi) high unemployment situation in the rural areas,

identified a target group for the solution of the above-mentioned problems. In 1969 Land Authorities were created across the entire island thereby increasing the number from two to thirteen. This was done in order to concentrate more fully on small farming activities. An important aspect was to identify action aimed at alleviating soil erosion and adopting sound land use practices.

In this context, a FAO Technical Mission in 1975 made recommendations to the GOJ on soil conservation measures. By 1976, in realization of the fact that soil conservation measures ipso facto were not enough to solve the problems causing low food production by the small hillside farmers of Jamaica, the GOJ solicited IICA's assistance for the development of viable systems of production for newly terraced land on an area typical of that used by the Jamaican small farmers.^{1/}

1.8 The problems faced today by the Agricultural Sector of Jamaica are greater in magnitude than the same problems identified three years ago. This is due to:

- i) the political and socio-economic crisis which the country has and continues to experience;

^{1/} Hillside Farming Study and Implementation Project in Jamaica (Allsides Pilot Development Project). December 1976

- ii) many changes in the political leadership of the Sector. In order to re-affirm the national importance which must be attached to the Sector, the Honourable Prime Minister has recently taken upon himself the portfolio of Agriculture.
- iii) the high level of unemployment across the country. Agriculture is the largest employer and therefore the most affected by unemployment and underemployment.
- iv) the constant on-going process of reorganization of MINAG has over the past three years created instability, insecurity and a lack of policy continuity.

As a consequence of the above facts the national problems affecting the Agricultural Sector have increased in degree as well as in scope.

1.9 Steps being pursued to redress the problems identified by IICA/Jamaica 1/ since its conception here in 1976 are rendered more difficult now because the soil conservation programmes designed for the country and for the area of Allsides have been subjected to budgetary constraints and labour unrests.

1.10 During the execution of the IICA Allsides Pilot Development Project in Jamaica, there were a number of changes in project direction. Dr. Cesar Paniagua, the Project Director, resigned in May 1978. Further, the IICA/Jamaica Director, Dr. Raul Soikes was transferred in June 1977 and Nicot Julien, the Economist, was also transferred at the same time. Despite these changes, project continuity was maintained. However, new strategies were developed vis a vis:

- i) execution of the project;
- ii) relations with the Government;
- iii) policies on training;
- iv) policies on preparation and publication of necessary agricultural data, which hitherto were unavailable;
- v) external linkages with other organizations;
- vi) public relations and closer co-ordination with professional and high level echelon personnel of MINAG.

1.11. Notwithstanding the above changes in project direction and staff, the project objectives as originally defined in the project document were retained and were complemented by activities which were deemed necessary to attain the established targets of the project. This was due principally to the fact that Dr. Abdul Wahab, the office quota expert who initiated the National Project in February 1977 and who was replaced in July 1977 by Dr. Cesar Paniagua, the FSB Production Specialist, re-assumed responsibility for the direction of the project in May 1978 following the resignation of the latter.

2. Identification of Changes in National Programmes and Institutions

2.1 There have been significant changes in the Agricultural Sector since 1977. These changes have been due to various causes among which are the following:

- i) the national economic crisis;
- ii) the very low investment profile;
- iii) the necessity for re-adjustment in the institutions dedicated to export crops;
- iv) the normative policy of the Government; and
- v) the continued low production and productivity in the Agricultural Sector.

2.2. It is readily observed at the present time that there is no willingness on the part of the Jamaican private sector to continue investments in the country due to several Government controls and economic constraints. The food shortages have spurred within the Government the desire to initiate a system of retail price controls. However, in spite of this, producers have not taken advantage of the unprecedented high prices for agricultural products earmarked for domestic consumption. Also, severe constraints in the foreign currency availability for agricultural inputs have resulted in decreased investment in the sector.

The above considerations have caused serious distortions in the marketing and distribution of agricultural products. Some of the unprecedented high price levels reached create incentives and windfall gains to the producer because the prices are in some cases 300% to 500% higher than world market prices. Further, this situation creates a disincentive to farmers in the full utilization of their farmlands. Those products whose prices are below world market prices have disappeared from the local markets.

2.4. Those Statutory Bodies which are dedicated to export-oriented crops have been subjected to institutional changes in different aspects over the last three years. In some cases such as the Banana Board there was a complete institutional overhaul in an effort to attain greater efficiency. In other cases such as the Coffee Board the changes were focussed mainly on the centralization of each of the Extension and Research activities. This meant that specialized Extension Officers became general practitioners in the overall extension services with the consequential disadvantages often associated with such changes.

2.5 The Ministry of Agriculture has been undergoing a continued reorganization. The main reorganization has resulted first in the geographical division of the country into three administrative areas 1/ and recently into four. These areas are the Northern, Southern, Central and Western Regions.

2.6 The Ministry of Agriculture is now divided into four main Sectors:

- i) the administrative policy-making, consisting of the Minister, Ministers of State and/or Parliamentary Secretary;
- ii) the Supporting Services such as the Land Administration Division and Soil Conservation, Veterinary Division, Marketing Development Division, Engineering Division, Fisheries Division and Data Bank and Evaluation Division;
- iii) the Research and Development Department which is decentralized into the four administrative agricultural regions of the country; and
- iv) the Production and Extension Department divided as in (iii) above.

2.7 The former Extension Division has now been absorbed into other Units or Divisions. The main extension activities, including some development ones, have been transferred to the Production and Extension Department, while its other development functions have been transferred to the newly created Department of Research and Development. In short, the reorganization has resulted in the redistribution of the extension functions which originally resided in an Extension Division which had an established lineage.

1/ IICA/Jamaica Publication N° 11-6, p. 38
Henry, D.D. et al "Agricultural Extension Service in Jamaica", 1979

2.8 At the time of the initiation of the project the Department of Co-operatives operated under the aegis of the Ministry of Agriculture. These co-operatives covered all sectors of the economy inclusive of Agriculture. Since then this Department became first the responsibility of the Ministry of Parliamentary and Regional Affairs and now has been transferred to the Ministry of Local Government.

2.9 Regardless of the institutional changes and modifications underway, agricultural production and productivity still falls short of the potential.

2.10 The above-mentioned structural and institutional changes have not resulted in the achievement of the envisaged efficiency sought. No new institutions, as such, have been created in the sector but there are strong indications that some institutions will be radically changed, among them those which are concerned with marketing, particularly the Agricultural Marketing Corporation.

2.11 There is a recognition that within the sector which consists of almost 80% of very small farmers (less than five acres) there is an urgent need for an appropriately structured institution to provide the necessary farmer credit for increased production.

2.12 In February 1977, when the Fondo Simon Bolivar project was initiated, the Director of the Soil Conservation Division of the Ministry of Agriculture was designated as GOJ's counterpart Director. At that time the Soil Conservation Division was a separate entity of the Ministry of Agriculture. Since then it has become part of the Agro-Forestry and Soil Conservation Division. This change has affected the independent budgeting capacity of the former Soil Conservation Division. At present such budgeting is being done within the realm of the new Division. It is fortunate that the functions and individuality of the former Division have not been noticeably affected. However, it is apparent that the workload for the former Director of the Soil Conservation Division, now Deputy Director of the newly created Agro-Forestry and Soil Conservation Division, has been substantially increased in some instances.

2.13 There have been no changes in Government's policies in regard to IICA or its national project. The Ministry of Agriculture, recognizing the importance of the IICA project in the areas of Research, Soil Conservation and Training, has requested an extension of the project, which request has been granted by IICA's Headquarters for the period June 1980 to June 1981.

3 Identification of Changes in Resources Available to National Institutions

3.1 The economic crisis of the country has affected the annual growth rate of the economy in the following manner:

	1971/73	1974/75	1976	1977 ^{1/}
(%)	3.9	-0.4	-6.7	-4.0

1/ Inter-American Development Bank, Jamaica, Socio-Economic Report N° GN 1086-2, p. ii, July 1979

The economic dislocations and the quantitative decreases in annual growth rates indicated above have pushed the Government to seek economic assistance in the form of increased external budgetary supports. In these efforts the Government appealed to the International Monetary Fund (IMF), an institution which has demanded as a pre-requisite a tighter budget and a greater emphasis on the productive sub-sectors. Consequently the Government initiated budget restrictions which have significantly affected the budgetary allocation for most sectors including Agriculture.

3.2 During the fiscal period 1979/80, due to the rejection by the Government of Jamaica of the stringent conditions set by the IMF for assistance during the fiscal periods 1978/79 and 1979/80, and the country's worsening economic conditions, the Government is operating a holding budget. This has seriously affected the services expected of the Ministry of Agriculture. Additionally, 1980 is an election year and a new national election is expected as soon as certain pre-conditions are met. This causes not only a greater necessity for a holding budget, but also has implications for any critical after-election changes which may be made.

3.3. The conditions described above have affected to a lesser extent the IICA counterparts than those of other divisions of the Ministry of Agriculture, but the resources currently available to the national counterpart institutions are less than originally planned.

3.4 It is impossible at the moment to assess the magnitude, type or quality of the budgetary constraints on the Ministry of Agriculture until the holding budget has been upgraded to a final budget.

3.5 The national institutions have adjusted to the present situation in different ways. Inter alia it has become necessary to require their agencies to:

- i) curtail official travel;
- ii) reduce mileage travelled;
- iii) temporarily freeze the filling of vacancies;
- iv) effect a stricter retirement of officers;
- v) limit overseas training and travel for officials; and
- vi) institute limits to levels of salary increases.

GOJ has laid down stricter guidelines for the acceptance of new projects which contemplated varying degrees of Government counterpart expenditures.

3.6 Nonetheless the Government of Jamaica has honoured its commitment to IICA on quota as well as on the Simon Bolivar Fund contributions.

4. Up-dating the Institutional Analysis

4.1 The originally identified institutions with which the IICA project worked were:

- Soil Conservation;
- Extension Services;
- Training;
- Research;
- Home Economics; and
- Crops and Soils.

4.2 As the Simon Bolivar Fund project developed, its scope was widened to include the involvement of the following sub-institutional agencies of the Ministry of Agriculture:

- Co-operatives;

- Marketing;
- Data Bank and Evaluation Division; and
- Planning and Policy Review Division

4.3 As the project developed and the first year's results on the systems of production were being extended to the Allsides farmers, one of the constraints to production in the systems established on farmers' plots was the unavailability of agricultural inputs. Also, IICA recognizing the benefits to be derived from MINAG's fertilizer subsidy programme, and identifying the many difficulties which small farmers experienced in obtaining farm inputs at prices more acceptable to them, initiated the Allsides Farmers Pre-Cooperative.

4.4 As IICA/Jamaica initiated basic studies related to hillside agriculture in Jamaica with special emphasis on Allsides, various marketing studies were completed for the area, and published as part of the collection of the series "Agriculture in Jamaica"^{1/}. The documents on marketing and the information presented therein were gathered jointly by IICA/Jamaica and the Planning and Policy Review Division of MINAG, in collaboration with the Production Unit.

4.5 As the performance of IICA became increasingly recognized, the need arose for surveys in and beyond the project areas. As a consequence, two major agro-socio-economic surveys were conducted jointly by IICA and the Data Bank and Evaluation Division.^{2/}

4.6 The impact of the Allsides project, its field-days, its training courses, its in situ demonstration to technicians and to farmers, as well as its publications, created in MINAG a greater awareness of the hillside farming problems and potentials.

4.7 The influence of the IICA project served as a catalyst for work done by international agencies in the area of hillside agriculture projects, e.g., the Integrated Rural Development Project of GOJ/USAID, the GOJ/Norway/FAO National Hillside Training Programme, the GOJ/IDB/IICA Pilot Hillside Agricultural Project (PHILAGRIP).

^{1/} IICA/Jamaica Publications 1-4, 1977; 1-3, 1978; 1-6, 1978; 11-5, 1979 III-7, 1979, IV-1, 1980.

^{2/} IICA/Jamaica Publications III-4, 1979; and IV-4, 1980

4.8 An important spin-off of the project will be a National Peanut Project which will utilize the research results obtained from the Allsides Project.

4.9 The constraints hindering the development of the priority institutions associated with the Simon Bolivar Fund project although not very critical are likely to remain unchanged until such time as the national economy improves and decisions are made in terms of the courses which these institutions will adopt in the future.

4.10 In 1977 during the preparation of the Country Level Action Plan (PANP)^{1/} the following priority areas were indentified:

- i) food production;
- ii) rural employment;
- iii) soil and water conservation;
- iv) training and education;
- v) research;
- vi) extension;
- vii) marketing;
- viii) assistance to rural youth; and
- ix) social organization.

4.11 During the initial stages of the implementation of the Simon Bolivar Fund Project the greatest effort was dedicated to "the development of a body of knowledge" for hillside agriculture. This was consistent with the first general objective of the project document titled "Hillside Farming Study and implementation Project in Jamaica (Allsides Pilot Development Project)".^{2/}

^{1/} Op. Cit., p. 71

^{2/} Allsides Project Document, Ministry of Agriculture/IICA/Jamaica, December 1976.

4.12 In the process of generating this body of knowledge the greatest emphasis was placed on agricultural research and soil conservation with field demonstrations.

4.13 A multi-faceted approach was employed in the areas of:

- i) testing of new crops for their performance and adaptability to the edaphic and climatic conditions of Allsides;
- ii) the compatibility of these crops when grown as intercrops with yams (the principal crop in the area);
- iii) pragmatic field demonstration and research on soil fertility and amelioration of soil acidity;
- iv) alternative methods of soil conservation of steeply sloping lands;
- v) collection of economic data, and subsequent analysis of these data with emphasis on potentially increasing farm income;
- vi) surveys aimed at determining traditional systems of production as an ex-ante project, to be compared with the ex-post situation, forming the basis therefore for assessing the rate of adoption of the new technology;
- vii) observation and analysis of the on-going social structures to determine the most viable social organizations to be utilized in the project;
- viii) demonstration to farmers of the advantage of soil conservation, avoidance of soil erosion, improvement of soil conditions, and potential benefits of proper soil management.

4.14 As the project developed and due to the initial successes of research and soil conservation it became clear that more emphasis should be placed on the extension and credit components. The extension component was not included in the project, but it has now become apparent that such a component would greatly accelerate the adoption of the new technology and the potential benefits which could accrue to the farmers.

4.15 The pressing problems facing Jamaica as identified by the GOJ and the PANP are:

- i) inadequacy of domestically produced foodstuffs;
- ii) low income of the minifundia farmers;

- iii) low investment levels in the Agricultural Sector, especially by small farmers;
- iv) low performance qualitatively and quantitatively for export-oriented crops;
- v) scarcity of foreign exchange for importation of key inputs for agricultural production and of food (including animal feeds);
- vi) negative balance of payments; and
- vii) high levels of unemployment and underemployment.

4.16 Considering that 80% of Jamaica is hilly to mountainous and that 78 % of all farmers are small hillside farmers with less than five acres of land (aggregate average is 1.5 acres) the greatest potential for improvement lies in the development of hillside agriculture, with a view to benefiting some 150,000 of a total of 190,000 farmer families.

4.17 The Allsides Project due to its relatively small size (622 acres and consisting of 233 farm families)^{1/} can at best demonstrate the potential productivity of hilly lands which if properly managed would lead to the solution of most of the national problems listed in Section 4.15 above.

4.18 The impact of the GOJ/IICA Allsides Project has been appreciated by MINAG and the Prime Minister himself. A measure of such appreciation is evidenced by the request to extend the Allsides Project and by the specific appeal from the Prime Minister during his meetings with IICA/Jamaica to establish and "Allsides in each of the thirteen parishes of Jamaica".

5. Identification of Differences of Opinion between IICA Project Staff and National Personnel

5.1 The highest ranking institutions co-operating in the execution of the Allsides Project are:

- i) the Soil Conservation Division;

^{1/} IICA/Jamaica Publication N° 111-4

"Agro-Socio-Economic Sample Survey of Allsides - Trelawny, Jamaica"
September 1979

- ii) the Research Division; and
- iii) the Extension and Training Division

5.2 Although many earlier efforts were made to tackle the problems associated with accelerated soil erosion in Jamaica, the records indicate that the subject of Soil Conservation had not been accorded the resources commensurate with its importance. With the creation of the Yallahs Volley Land Authority (YVLA) in 1951, steps were taken to place soil conservation on a more structured basis. This was followed in 1955 by the creation of the Christiana Area Land Authority (CALA). Subsequently in 1969 eleven additional land authorities were established. More recently the rapidly increasing density of population per square mile has required that hillside lands be used more intensively and that they be appropriately conserved.

5.3 Extensive terracing of hilly lands was done in the Yallahs Watershed during the period 1951 to 1960. These works were conceived and implemented in isolation from agricultural research on the relevant aspects of soil conservation, and respective land use patterns adopted. Without this, extension lacked an appropriate basis for guiding farmers. The main objective of the terracing was the conservation of the soil resource. However, in addition to terracing there were other soil conservation methods which were low cost but which were not continued by farmers once they had been initiated with the assistance of Extension Officers.

5.4 The situation in the Christiana Area Land Authority (CALA) of which Allsides forms a part was somewhat different in that the overall potential for agriculture was better for CALA than was that for the YVLA.

5.5 The lack of economic incentives created the "typical gap" between planning at Government level and execution at small farmers' level. This "typical gap" in the Third World is the distance between the macro-concept of the planners and the micro-concept of the farmers to whom the projects are directed.

5.6 In the case of Allsides, the project proposals included provision for close linkages between those responsible for soil conservation, research and extension and the beneficiaries. The beneficiaries or the target group- the small farmers, would thus be enabled to observe for themselves demonstrated recommended changes in incomes arising from the new systems of production for newly terraced lands produced for them.

5.7 One very important aspect of the Allsides research in relation to the beneficiaries is that the systems of production have been designed

using yams as the principal crop. Yam has traditionally been produced in the area for three hundred years, The farmers know the yields to be expected in their traditional system of farming and were reluctant to adopt any changes which would not ensure beyond any doubt that these changes would not decrease their yam yields but would actually increase their incomes.

5.8 The joint participation of technical personnel from the Divisions of Soil Conservation, Research and Extension, in the project has increased their enthusiasm, because it represented a breakthrough in the Government's efforts to assist the small farmers. At the same time the results have demonstrated viability of farming systems as one approach to solving a number of the national problems which have contributed to the national economic crisis, particularly those related to production, productivity, incomes and employment.

5.9 From the above discussion it is believed that there is no difference in opinion between the staff of the national institutions and IICA and that both agree on the strategy and approaches towards solving the national problems.

5.10 The above-mentioned national institutions perceive their limitations in the same context as does IICA. These limitations are obvious in budgetary deficits as well as in human resources. More importantly both the National Agencies and the IICA staff recognize the following weaknesses;

- i) inadequacy of the extension staff;
- ii) lack of credit-worthiness of many farmers who therefore are unable to obtain credit for farming; and
- iii) absence of an appropriate mechanism for ensuring that farmers comply with measures designed to conserve soil, maintain terraces, etc.

5.11 To solve the problem of hillside agriculture in Jamaica it is imperative that:

- i) an ample budget be provided to the sector;
- ii) steps be taken to obtain adequately trained personnel in sufficient numbers; and
- iii) there be as much continuity as practicable in the tenure of office of staff assigned to the project.

5.12 IICA is convinced that the GOJ is aware of the problems of hillside farming and is making considerable efforts to solve this problem. The IICA/Jamaica staff expressed a view that the GOJ should use the thirty-three watershed areas already identified across the island, declaring each watershed areas already identified across the island, declaring each watershed a management unit, in the belief that this would result in a more holistic approach to solving the problem on a national basis. Also, the IICA/Jamaica staff is of the opinion that a "package of projects" should be prepared for each watershed along the following lines:

A. Productive Projects

1. Land tenure;
2. Labour utilization;
3. Capital needs;
4. Input needs and surveys;
5. Water resources available and water needs;
6. Crop management and national needs;
7. Soil conservation;
8. Marketing;
9. Agricultural extension;
10. Agricultural research;
11. Communications;
12. Pre-industrialization of production;
13. Credit.

B. Social Projects

1. Education;
2. Health;
3. Housing;
4. Community organization;

5. Rural electrification;
6. Water for human consumption.

C. Institutional Projects

1. Watershed management planning;
2. Social organization;
3. Training of human resources;
4. Project management training;
5. Co-ordination;
6. Project evaluation^{1/}.

5.13 The above projects and sub-projects would tend to make each watershed an "integrated rural development project". Different sub-projects could have different sources of financing allowing Jamaica to capture and take advantage of the limited international financing available for development of its National Hillside Programme (NAHILLPRO).

5.14 The national institutions while agreeing with the above approach indicate that this would require a total overhaul of policy and organization of the Agricultural Sector which at present is difficult due to the politico-socio-economic crisis.

6. Analysis of the IICA Project Objectives

6.1 The general objectives of the project were:

General Objectives:^{2/}

To co-operate with national organizations on:

- a) the development of a body of knowledge on hillside farming and cropping systems conducive to change the traditional pattern of

^{1/} Aguirre, J.A. "America and IICA in the Decade of the 80's, First Prize paper presented to the 50th Anniversary of the Kellogg Foundation, San José, Costa Rica, IICA Headquarters, 1979.

^{2/} "Allsides Pilot Development Project", op. cit. p. 2



of hilly land farming.

- b) the spread of that body of knowledge throughout the pilot area; and
- c) extending pilot area results to the whole hillside region.

Specific Objectives:

- a) To develop a new system of production based on multiple cropping and efficient utilization of land and water resources.
- b) To increase the productivity and production of certain food crops (yams, beans, potatoes, cassava, sweet potatoes).
- c) To increase food production, income, nutrition and improve the standard of living of approximately three hundred farm families occupying about 622 acres of hilly land in the parish of Trelawny.
- d) To develop an institutional framework, capable of implementing similar changes in other areas of the country.
- e) To develop accurate production figures for crops grown by the small hill farmer.
- f) To train local professional technicians.

The objectives stated above are as relevant today as they were in late 1976 when the project was prepared.

6.2 The changes which affected the national institutions have not changed conditions to the extent of affecting the objectives of the project.

6.3 During the preparation of the Operative Programme for the fiscal year 1977-1978, the planning and operations mission introduced and/or modified certain elements of the project document and consequently spelled out the following new set of specific objectives:

Specific Objectives:

(As spelled out by the Central Office planners in the preparation of the Budget Programme 1977/78) in order to achieve the general objectives indicated above, IICA will help the Government of Jamaica to:

- a) Improve its institutional system, rendering it capable of formulating and implementing appropriate hillside farming systems on a national scale;

- b) develop and test appropriate farming systems for hillside food production;
- c) extend proven hillside farming systems to selected areas;
- d) design and implement a marketing system for hillside produce which will minimize post-harvest losses and increase the farmer's share in the final price; and
- e) design and implement functional models of farmers' organizations for hillside production and marketing purposes.

6.4 The objectives of the project could not be changed unilaterally and so, after consultation with MINAG the new objectives were disregarded. Nonetheless on widening the scope of the project as the project got underway the project adapted some of the requested objectives.

6.5 IICA/Jamaica, recognizing the urgent need for MINAG to appoint a Project Co-ordinating Committee for the project successfully requested such a committee from MINAG. This Committee is comprised of the following members. The:

- Deputy Director, Western Division (Co-ordinator)
- Director, Soil Conservation Division
- Parish Manager, Trelawny
- Divisional Extension Officer
- Parish Home Economics Officer
- Allsides Project Counterpart Agronomist
- Allsides Project Extension Officer

Additionally, high echelon personnel from MINAG, Kingston, and other Governmental agricultural bodies lying in close proximity to the project would occasionally participate at these meetings. IICA is represented by the IICA/Jamaica professional staff.

6.6 The objective (d) designed by IICA's planners, in reference to marketing cannot be implemented because the GOJ already has a National Marketing Programme which covers the Allsides farmers and is designated the Agricultural Marketing Corporation.

6.7 With regard to specific objective (e) as proposed by the planners, the IICA/Jamaica unit initiated and obtained the assistance of the Co-operative Department in forming a pre-cooperative along the guidelines of the GOJ.^{1/}

6.8 The national problems on which the project focussed (Hillside Agriculture) are not solved and will not be resolved for a long time. As stated before IICA is working with MINAG to demonstrate to technicians and farmers and economically and technically viable alternative which will result in:

- i) increased food production;
- ii) increased levels of productivity;
- iii) increased rural employment; and
- iv) the general achievement of the GOJ's targets for the Agricultural Sector.

6.9 The national institutional staff share with IICA/Jamaica the belief that no change should be envisaged in the project objectives. The present need now resides in the area of technology transfer and paraphrasing the words of the Prime Minister on the occasion of his last visit to Allsides "there is need...of an Allside...and IICA in every parish in Jamaica".

^{1/} IICA/Jamaica Publication N° IY-6
Wedderburn, M.R. "Allsides Farmers Pre-Cooperative - Socio-Economic Assessment"
March 1980

1. Introduction

1.1 Approximately 80% of the total land area of Jamaica is hilly to mountainous. About 80% of the country's farmers are small producers having less than five acres of lands and who are largely confined to the hillsides (see Section 1.5 of Document N° 2 for distribution of farmers by size groups). Notwithstanding the disadvantages of farm size the small farmers have traditionally produced nearly 90% of the foodstuffs produced for domestic consumption.

1.2 These crops are mainly centered around root crops such as yams, Irish potatoes, cocoa, dasheen, and other soil disturbing crops e.g. ginger, which have contributed to considerable soil loss over the years.

1.3 In cognizance of the above facts which were compounded by the rapid increase in population density on agricultural lands, the GOJ obtained technical assistance from FAO to analyze the situation with a view determining what ameliorative action could be pursued.

1.4 In this context, the GOJ/FAO studies showed that under traditional practices associated with the farming patterns indicated above, soil losses as much as 54 tons per acre per year occurred. These studies also showed that bench terracing resulted in considerable decrease in the level of soil loss (8 tons per acre per year) and recommendations were subsequently made that the GOJ vigorously pursue this corrective measure inter alia for mitigating the problems of soil erosion.

1.5 However, militating against bench terracing is the fact that it was an expensive measure which could only be viable if associated with:

- i) high value crops;
- ii) intensive cropping; and
- iii) appropriate management.

It was also recognized that if bench terracing were to be accepted by farmers, the Government would have to heavily subsidize the construction costs of these terraces.

The GOJ's experience in the area of bench terracing up to this stage indicated that in the absence of improved agricultural practices and farming systems to sustain higher than traditional levels of operations on these soil conserved farms, the programme would be doomed to failure.

In consequence, the GOJ in 1976 sought the assistance of IICA to:

- i) develop a body of knowledge on hillside farming and cropping systems conducive to change the traditional pattern of hilly land farming;
- ii) spread this body of knowledge throughout the pilot areas (Allsides, Trelawny); and
- iii) extend the pilot area results to the whole hillside region.

Following up on this request, MINAG, in collaboration with IICA, prepared a project document titled "Hillside Farming Study and Implementation Project in Jamaica - Allsides Pilot Development Project". This proposal was accepted by IICA for financing through the Simon Bolivar Fund. In consequence, an agreement was duly signed on December 6, 1976 between the Honourable Prime Minister, GOJ and IICA for the implementation of the above project.

2. Design of Project Activities

2.1 To objectively assess the degree of accomplishment of the project it is first necessary to catalogue the actions and/or activities which were planned, approved and executed from the inception of the project.

2.2 Preliminary Period (January 1977 to June 30, 1977)

2.2.1 Activity IV.LJ.2.2.1 - Collaboration in the elaboration and execution of projects on soil conservation and management. The purpose of this was to provide opportunities for the development and execution of project and to assist MINAG in the preparation of a technical manual in soil conservation for its field staff.

2.2.1.1. Warren Forsythe paid two visits during which he prepared maps and reports dealing with "Points of Equal Erosion". Also, Augustin Merea visited Jamaica for a one-week period during which he established the bases for collaboration by MINAG in the efficient management and utilization of water. This was followed by the participation of the Head of the Agricultural Engineering Division, MINAG, at a seminar on drip irrigation held in Mexico. This training was used on the irrigation programme for the dry plains of Jamaica.

2.2.2 Activity IV.LJ.2.1.2 - Training of national technicians in soil conservation. As a corollary to this activity, short term courses (two weeks) were given by Warren Forsythe at the Smithfield Soil Conservation and Training Centre.

2.2.3 Activity IV.LJ.3.1.1 - Analysis of the institutions of agricultural promotion. This activity resulted in the analyses of the various divisions of MINAG with emphasis on those departments which promoted food production. Further, a clarification of their role within the "newly created" structure of MINAG was made.

2.2.4 Activity IV.LJ.3.1.2 - Training of functionaries of the Agricultural Sector. This activity served to impart in-service training to national technicians in the areas of:

- i) soil fertility assessment; and
- ii) agrarian reforms.

2.2.4.1 The soil fertility training was done by Abdul Wahab with the technical support of Rufo Bazan; and Messrs. J. Bosco Pinto and F. Oliart presented seminars on Agrarian Reform.

2.2.4.2 Arising from the soil fertility exercise was a fertilizer programme to be adopted for newly terraced soils of Allsides. As will be observed later, this in-service training exercise was widened in scope as a consequence of MINAG's request.

2.2.5 Activity IV.LJ.3.1.3 - Collaboration in the analyses and design of systems of production. This activity was accomplished with the participation of:

Messrs. Henry Stennett
Leslie Grant
Len Hutchinson
Errol McDonald - ail of MINAG

and from IICA, Messrs.:

Rufo Bazan
Warren Forsythe
Nicot Julien
Antonio Pinchinat
Raul Soikes
Abdul Wahab

2.2.5.1 As a result, plans were prepared for the demonstration and testing of ten cropping systems on terraces.

2.2.6 Activity IV.LJ.4.1.1 - Case study of the domestic marketing systems. This activity was aimed at describing the "Higgler" Marketing System which is ingrained in the marketing of domestic

products and is typical of the hillside areas. The activity culminated in the preparation of a document titled "The Marketing of Agricultural Produce in Jamaica".

2.3 Year One of Proje (July 1977 through June 1978)

2.3.1 This period represented the first full year of implementation of the National Project, during which a total of 17 activities were planned and executed.

2.3.2 In the preparation of the second version of the operative programme for the period 1977/78, some of the specific objectives for the National Project were modified and speit out differently from the project doment which was approved and signed in December 1976.

2.3.3 Set out below are the general and specific objectives as they apperar in the Allsides Project Document.

General Objectives:

To co-operate with national organizations on:

- a) the development of a doby of knowledge on hillside farming and cropping systems conducive to change the traditional pattern of hilly land farming;
- b) the spread of that body of knowledge throughout the pilot area: and
- c) extending pilot area results to the whole hillside region.

Specific Objectives:

To:

- a) develop a new system of production based on multiple cropping and efficient utilization of land and water resources;
- b) increase the productivity and production of certain food crops (yams, beans, potatoes, cassava, sweet potaotes);
- c) increase food production, income, nutrition and improve the standard of living of approximately 300 farm families occupying about 622 acres of hilly land in the parish of Trelawny;

- d) develop an institutional framework, capable of implementing similar changes in other areas of the country;
- e) develop accurate production figures for crops grown by the small hillside farmer; and
- f) train local professional technicians.

2.3.4 As spelled out by the Central Office planners in the preparation of the Budget Programme 1977/78, the specific project objectives were as follows:

To:

- a) improve its institutional system, rendering it capable of formulating and implementing appropriate hillside farming systems on a national scale;
- b) develop and test appropriate farming systems for hillside food production;
- c) extend proven hillside farming systems to selected areas;
- d) design and implement a marketing system for hillside produce which will minimize post-harvest losses and increase the farmers' share in the final price; and
- e) design and implement functional models of farmers' organizations for hillside production and marketing purposes.

2.3.5 The targets over the three year life span of the project as specified in the original Agreement of December 7, 1976 are as follows.

First Year: (ending June 30, 1978)

The:

- a) establishment of a 3-acre plot in order to:
 - demonstrate improved food production techniques;
 - study new techniques and production systems, including economic aspects;
- b) extension of improved food production techniques, application and dissemination of research results of the demonstration plot;

- c) training of personnel to support the research, demonstration and extension activities of the project through seminars, production of extension materials, workshops and field trips;
- d) study of the institutional framework necessary to deliver production to consumers and help to improve the organizational performance;
- e) soil conservation measures: (responsibility of MINAG)
 - establishment of 100 acres of soil conservation works;
 - establishment of 100 acres of waterways;
 - establishment of 75 acres of gully control; and
- f) establishment of 100 acres of crop development.

Second Year: (ending June 30, 1979)

The:

- a) maintenance of demonstration plot and continuation of research, demonstration and extension activities;
- b) extension of the improved food production techniques and application and dissemination of the research results of the demonstration plot;
- c) continuation of training;
- d) improvement of institutional framework;
- e) soil conservation measures: (responsibility of MINAG)
 - establishment of 150 acres of soil conservation works;
 - establishment of 150 acres of waterways;
 - establishment of 100 acres of gully control works; and
- f) establishment of 150 acres of crop development.

Third Year: (ending June 30, 1980)

The:

- a) maintenance of demonstration plot and continuation of research demonstration and extension activities;

- b) extension of the improved food production techniques, application and dissemination of the research results of the demonstration plot;
- c) continuation of training;
- d) improvement of institutional framework;
- e) soil conservation measures: (responsibility of MINAG)
 - establishment of 85.95 acres of soil conservation works;
 - establishment of 85.95 acres of waterways;
 - establishment of 25.00 acres of gully control;
- f) establishment of 85.95 acres of crop development; and
- g) planning of dissemination of pilot area results to the whole hillside region of Jamaica.

2.3.6 Targets as specifies in the Budget Programme for 1977/78 were as follows:

- a) a first draft of a National Programme for the development of hillside agriculture will have been completed by the GOJ with the assistance of IICA;
- b) the first cycle of the farming systems trials will have been completed by April 1978; results and recommendations will be available to the GOJ for implementation in the Allsides area and other areas selected by the Government;
- c) capabilities will be developed within the Operative Unit at Allsides, for the performance of the following functions:
 - planning and programming;
 - services co-ordination;
 - administration and management;
 - research and transfer of technology; and
 - farmers' organization;
- d) the marketing system for hillside products, particularly in the Allside area, will have been studied and recommendations for its improvement will be formulated and tested in the same area;

- e) with IICA's assistance, the GOJ will have selected a number of hillside areas (additional to Allsides) for the implementation of proven hillside farming systems. Concomitantly, some services such as research and extension, will have been streamlined for this task, and new operative units will be organized in the areas that have been selected.

2.3.7 The activities programmed and accomplished for the year 1977/78 were as follows:

2.3.7.1 Activity IV.XLJ.1.1.1 - Organization of a work group for the formulation of a National Hillside Farming Development Project. This activity was accomplished through the joint participation of MINAG and IICA/Jamaica. A six-member work group was organized, with four from MINAG, and the remaining two from IICA. A draft profile of a National Hillside Farming Development Project (NHFDP) was prepared and submitted to MINAG. MINAG approved this document and communicated its approval to Messrs. Fernando Suarez de Castro and Antonio Pinchinat in November 1977.

2.3.7.2 Activity IV.XLJ.1.1.2 - Development of methodologies for the formulation of the NHFDP. This activity led to the preparation of a 58 page paper titled "Brief Overall Diagnosis of Hillside Farming in Jamaica". It was prepared through the joint efforts of MINAG and IICA staff and while being a descriptive paper contained up-to-date quantitative information on hillside farming.

2.3.8 Activity IV.XLJ.1.1.3 - Formulation and approval of NHFDP. A 60 page paper was prepared titled "A National Programme for the Development of Hillside Farming in Jamaica" which set out the objectives, goals, strategy and recommendations for implementation. Preparation was undertaken by the Planning Division of MINAG, assisted by IICA staff.

2.3.9 Activity IV.XLJ.1.1.4 - Formulation of a plan for the implementation of the NHFDP.

2.3.9.1 Several meetings were held between MINAG and IICA staff arising from which formal presentations were made to the Permanent Secretary and Chief Technical Officer of MINAG with a suggestion that a formal plan be prepared for implementation.

2.3.9.2 Meetings were held between GOJ officials and those of IDB to seek project preparation funds. This led to an agreement of an IDB grant of (US)\$45,000 - for a total project of (US)\$1.5 million. It is now gratifying to note that an agreement was signed in January 1980 between the GOJ and IICA for the preparation of a project document titled "Pilot Hillside Agricultural Project" (PHILAGRIP), with supporting funds from IDB. MINAG decided to postpone official policy action due to the many and diverse types of assistance being offered to GOJ in this field from USA, IICA, FAO-Norway, Korea, Yugoslavia, Hungary, Israel and Venezuela.

2.3.10 Activity IV.XLJ.1.1.5 and IV.XLJ.1.1.6 - Diagnosis of farming systems for Allsides and neighbouring areas and socioeconomic study of farmers in the project area. These two activities were aimed at obtaining benchmark information from the Allsides and neighbouring areas in regard to:

- i) farming systems being practised;
- ii) income;
- iii) employment;
- iv) values; and
- v) marketing

2.3.10.1 A questionnaire was prepared in conjunction with the Data Bank and Evaluation Division (MINAG). This questionnaire was tested and all the standard procedures adopted in conducting the survey.

2.3.10.2 The results of this survey are presented in IICA/Jamaica Publication N° 111-4 in 1979.

2.3.11 Activity IV.SLJ.1.1.7 - Establishment and maintenance of observation and demonstration plots on systems best adapted to hillside agriculture. This activity was aimed at developing a body of knowledge on farming systems best adapted to terraced hillside lands.

2.3.11.1 It was executed through:

- i) detailed soil analyses and an examination of the cropping systems which obtained in the area;

- ii) compilation and analyses of rainfall data;
- iii) planning of the cropping systems to be evaluated;
- iv) designing the field trials on cropping systems, soil amelioration and crop adaptation;
- v) establishing the field trials on cropping systems, soil amelioration and crop adaptation;
- vi) introduction of a livestock component;
- vii) setting-up of an appropriate record system ;
- viii) creating additional interest to farmers and national technicians by hosting several field days;
- ix) in-service training of national project staff and technicians associated with current practices and benefits which could accrue from the use of and benefits which could accrue from the use of proven soil conservation practices.

2.3.11.2 Summarized observations on the early stages of the project were:

- i) great resistance to change by farmers;
- ii) difficulties in obtaining and retaining staff national and international - militated against the success of the project at the outset.

2.3.12 Activity IV.XLJ.1.1.8 - Reinforcement of the operative unit at Allsides in the fields of programming, co-ordination and management. This activity was designed to reinforce the institutional co-ordination in planning, management and execution of the project.

2.3.12.1 Due to the continuing reorganization and lack of clear leadership within MINAG it was difficult to set definite structures for co-ordination. Nonetheless field days and monthly meetings were held with the various entities involved in the project.

2.3.13 Activity IV.XLJ.1.1.9 - Training national personnel in hillside farming technology. This activity was aimed at training national technicians in the areas of hillside farming technology, with special emphasis on research and transfer of technology for improved hillside farming systems.

2.3.13.1 In the execution of this activity the following training was provided:

- i) an intensive two week short course involving 32 lecturers and 54 trainees (extension officers);
- ii) ten national technicians (research and extension) received in-service training on the project site of which six were specially trained for the USAID/GOJ Integrated Rural Development Project which is also predicated on soil conservation;
- iii) two national technicians received specialized graduate training at CATIE, Costa Rica for a five week period;

2.3.13.2 Arising from the training of national technicians two publications were prepared titled "Hillside Farming Technology Intensive Short Course" (Volumes I and II).

2.3.14 Activity IV.XLJ.1.1.10 - Design and testing of alternative models of Farmers' organizations.

2.3.14.1 At the suggestion of Central Office (Planning Division) and Regional Office, Joao Bosco Pinto visited Jamaica and worked with functionaries of the Ministry of Youth.

2.3.14.2 Regrettably his report, while reiterating the need for social organization, lacked a single mention of alternative models or strategy for achieving same.

2.3.15 Activity IV.XLJ.1.1.11 - Training and transfer of technology. This activity was aimed at providing appropriate methods for technology transfer.

2.3.15.1 Two seminars were held at Smithfield and Allsides. One seminar on soil conservation was held for senior level soil conservation officers of MINAG. One graduate student from the University of Missouri was sponsored and supervised. His Masters thesis (M.S.) was titled "An Economic Analysis of Intercropping Systems: Case Study, Allsides Development Pilot Project, Jamaica". In consequence of in-service training in soil fertility assessment of newly terraced soils, a paper was prepared and later present at a workshop of Soil Fertility Management in the Humid Tropics held in Kingston,

April 2 - 7, 1978. This workshop was sponsored jointly by USAID, the Universities of Cornell, Puerto Rico and the West Indies, the GOJ and IICA/Jamaica.

2.3.16 Activity IV.XLJ.1.1.12 - Studies of marketing for the principal foodstuffs produced in hillside farming, particularly Allsides. This activity was focussed on the marketing conditions for hillside products, especially principal foodstuffs.

2.3.16.1 In collaboration with MINAG, basic studies were promoted on the marketing of common hillside staples. These studies involved the preparation of appropriate questionnaires and subsequent field surveys at Allsides.

2.3.16.2 As a result of this activity, two papers were prepared on the marketing of yams and dsheen.

2.3.17 Activity IV.XLJ.1.1.13 - Upgrading the marketing systems in the purchase and distribution of hillside agricultural products, specifically in the Allsides area. This activity was aimed at training national personnel in specific problems relating to marketing.

2.3.17.1 A seminar on marketing of agricultural products for the Western Region of Jamaica was held at which 28 participants attended. Two Jamaican technicians were sponsored to the Regional Seminar on Post Harvest Losses held in Santo Domingo. Technical assistance was provided in the preparation of a document titled "The Marketing of Agricultural Produce and Post Harvest Losses in Jamaica" by C.V. Smikle.

2.3.18 Activity IV.XLJ.1.1.14 - Definition and application of criteria for the selection of areas in the first stages of implementation of the NHFDP.

2.3.18.1 It was envisaged that this activity would result in the definition of criteria for selecting priority watershed areas for agricultural development within the context of the NHFDP.

2.3.18.2 Assistance was provided to MINAG for a joint testing of the "Allsides Cropping Systems" at MINAG's experiment stations located at Top Mountain, Mt. Erie, and Smithfield. Field inspection tours were made to various watersheds across the island. Assistance was rendered in the preparation of a document setting out an ordinal scale for the development of the watersheds.

2.3.18.3 This activity assisted in establishing the bases for the establishment of the NHFDP which is already receiving consideration by the GOJ.

2.3.19 Activity IV.XLJ.1.1.15 - Increasing national capability in existing research and transference institutions to develop and implement hillside farming systems in Jamaica. This activity was aimed at assessing and increasing research and extension capacities of MINAG.

2.3.19.1 An agricultural research position paper was prepared which:

- i) reviewed the past and present status;
- ii) identified areas of constraint;
- iii) recommended alternative institutional structures; and
- iv) suggested several strategies for increased efficiency of resources devoted to national research.

2.3.19.2 As a follow-up, two high echelon MINAG functionaries were sponsored to the regional research workshop in Haiti, where the above-mentioned paper was presented and discussed. The recommendations contained therein are at present being examined by MINAG in its continuing reorganization of national research.

2.3.20 Activity IV.XLJ.1.1.16 - Organization of new operative units in areas selected for expansion of the NHFDP. The aim of this activity was to create new operative units in areas selected for the NHFDP.

2.3.20.1 Field trials were established at two hilly locations viz., Sweet Water in St. James, and Smithfield in Hanover.

2.3.20.2 Due to problems generated by sustained labour unrest, MINAG was forced to discontinue the planned operation.

2.3.21 Activity IV.XLJ.1.1.17 - Promotion of external financing for the National Hillside Farming Project. The purpose of this activity was to host a field day at Allsides for participants of the Commonwealth Agricultural Society (CAS) with the specific objective of generating interest in assisting Jamaica for the development of agricultural projects in the hilly areas.

2.3.21.1 A hand-out was prepared describing the multiple cropping systems and their potentials for enhancing farm income. A field day at Allsides was organized for the participants of the CAS. However, for reasons beyond the control of the IICA/Jamaica office, the field tour to Allsides was aborted.

2.4 Year Two of Project (1978/79)

2.4.1 A total of 10 activities were programmed for this budget period. These activities were designed to provide consolidation and continuity to the national project. Having initiated the activities listed for the previous year, a base was now established for firmer collaboration and co-ordination with MINAG and other national agencies for achieving the objectives of the project.

2.4.2 The activities, their respective objectives and results are catalogued as follows:

2.4.2.1 Activity IV.XLJ.1.1.1 - Second year establishment and maintenance of observation and demonstration plots in Allsides on systems best adapted to hillside agriculture. The main purpose of the activity was to establish demonstration plots for further evaluation of cropping systems and to refine and validate those systems which had been demonstrably successful agronomically and economically in year one.

2.4.2.1.1 In summary, the following was done:

- the second year crop cycle of farming systems was established;
- ten cropping systems were tested;
- refinement was done on one system which in the previous crop cycle (1977/78) outperformed all other systems;
- semi-commercial plantings of three promising cropping systems were established;

- production data from all farming systems established were obtained;
- commercial plantings of eight most promising
- with a view to simulating livestock practices pursued by farmers, two heads of cattle were acquired to utilize the large quantity of napier grass produced on the resiers of the bench terraces;
- a total of 12 senior year students from the Jamaica School of Agriculture (J.S.A.) received intensive residential training on the theoretical and practical aspects of the farming systems over a period of six weeks.
- MINAG technicians inclusive of those working on rural development programmes were trained in crop and field management techniques for hillside farming;
- two field days were hosted by IICA/MINAG for the purpose of demonstrating the technology being developed in relation to:
 - soil conservation;
 - multiple cropping systems; and
 - optimum utilization of water resources;
- at the first field day there were 68 project area farmers and wives together with 26 senior students from the Wait-A-Bit All Age School. At the second field day 70 farmers, 50 wives, 15 research technicians from MINAG and 5 technicians from the USAID (Kentucky University team working on baseline data for research, extension and education project in Jamaica) attended; and
- the extension officers assigned to the Allsides Project have received and continue to receive training in the area of farming systems, and crop and soil management.

2.4.2.1.2 Resulting from the in-service training, a technical paper was prepared and presented at the XVI Annual Meeting of the Caribbean Food Crops' Society, held in the Dominican Republic in 1979.

2.4.2.2 Activity IV.XLJ.1.1.2 - Establishment of observation plots on farming systems at hilly watersheds other than Allsides, jointly chosen with MINAG. This activity was aimed at the establishment and maintenance of demonstration plots on cropping systems at selected hilly watersheds in compliance with the Prime Minister's request; and to continue training of national technicians.

2.4.2.2.1 Six nationals received intensive in-service training in Multiple Cropping and Soil Management techniques for newly terraced lands. Following their training the technicians participated in the planning and establishment of demonstration plots in cropping systems at two watersheds viz., Smithfield in Hanover and Sweet Water in St. James. Additionally, in-service training was imparted to two recent graduates in Agriculture, who were to undertake soil fertility studies for newly terraced lands.

2.4.2.2.2 Considerable efforts were made to secure an appropriate plot of land for undertaking research and demonstration work on soil conservation measures other than bench terracing. In conducting this exercise, a number of sites were identified on Government owned land. These sites proved to be inappropriate for many reasons. An appropriate plot was eventually identified on privately owned land situated at Olive River in the Lowe River area of Trelawny. Soil surveying and sampling work on the plot was completed. MINAG pursued arrangements for formalizing tenancy and use of the plot for a period of five years in the first instance.

2.4.2.2.3 Arrangements were finalized for a joint trip by MINAG and IICA technicians to visit CATIE, Turrialba, to review current work on cropping systems there.

2.4.2.3 Activity IV.XLJ.1.1.3 - Development of appropriate soil management practices for terraced hillside farms, and strengthening of the Extension Division of MINAG. This activity was aimed at ascertaining fertility levels of newly terraced lands and determining remedial measures to be employed for full expansion of the cropping system trials.

2.4.2.3.1 Six graduate technicians from MINAG (other those trained in LV.XLJ.1.1.2) received in-service training in the following areas:

- a) field plot design and establishment;
- b) use of rainfall data for determining inter alia erosivity indices and predicting optimal planting time;
- c) data collection;
- d) data analyses;
- e) data interpretation; and
- f) preparation of technical reports.

This training is related to soil fertility, hillside farming of terraced lands, crop management, and evaluation of legume cultivars for hillsides.

2.4.2.3.2 A three day training seminar in hillside farming jointly sponsored by MINAG and IICA was held for professional staff of :

- i) MINAG;
- ii) Banana Board;
- iii) Coffee Board;
- iv) Cocoa Board
- v) CARDI;
- vi) UWI, and
- vii) Meteorological Division.

Twenty lectures were given in the areas of:

- soil conservation;
- food production for hillsides;
- legume production emphasizing increased yields; and
- socio-economic aspects of hillside agriculture.

A workshop followed on constraints of hillside farming which resulted in recommendation for future action aimed at the removal of these constraints. As a result of this activity, three papers were prepared as follows:

- Hillside Farming in Jamaica
- Legume Trials on Terraced Soils
- Fertilizer Studies on Peanuts

2.4.2.4 Activity IV.XLJ.1.1.4 - Continued reinforcement of the operative units at Allsides in the areas of farming technology, programming, co-ordination and management. It is envisaged that this activity should foster the development of an institutional framework capable of implementing similar changes in other areas of the country.

2.4.2.4.1 Two field days were held at Allsides for national technicians to enable on the spot discussions and demonstration of improved technology in the areas of soil conservation, water management and farming systems. A total of 86 technicians participated.

2.4.2.4.2 Field days were hosted for extension staff from offices of the Western Division of MINAG.

2.4.2.4.3 One omnibus field day was held which covered all aspects of the project, namely;

- operationalization of the project;
- extension methods;
- home economics - using locally (Allsides) produced commodities; and
- social organization of inputs and discussions on advantages of these organizations.

2.4.2.4.4 After visits to the demonstration plots, twenty farmers offered their plots for commercial intercropping trials so that further demonstrations on increased production and productivity could be carried out during year three of the project.

2.4.2.4.5 The research plots demonstrated the paramouncy for a dynamic extension system which constituted the main discussion topic arising from the field day. This discussion contemplated the need for a social organization to institutionalize the technological gains made at Allsides. The considerations of the need for social farm organizations

culminated in 30 farmers indicating a wish to become involved in a "pre-cooperative".

2.4.2.4.6 Monthly meetings of the MINAG/IICA Allsides Coordinating Committee were held. These meetings provided the basis for coordinating the Allsides project activities with those of the Parish and of the Western Agricultural Region.

2.4.2.4.7 Other meetings were held at the Allsides Project site with personnel from MINAG and other international organizations such as IDB, USAID, CIDA, CARDI and various U.S. Universities. Technicians from other projects, notably the USAID First Rural Development Project visited on various occasions to gain first hand knowledge of the techniques used and the technologies developed on the project. In this respect a team of five experts from Kentucky University (working through USAID on a base line study project in the areas of Research, Extension and Education) visited Allsides.

2.4.2.5 Activity IV.XLJ.1.1.5 - Training of national personnel in hillside farming technology. This activity served to extend results of operations in the pilot area to other hillside regions in Jamaica and to train local professional technicians in hillside farming techniques specifically in areas related to soil conservation and improved cropping systems.

2.4.2.5.1 Arrangements were made with the Training Division of MINAG for the hosting of a residential course titled "An Approach to Agricultural Settlement of Hilly Lands". The course content and programme were worked out with MINAG. Lecturers were identified and arrangements were made for their inputs in the course. Discussions were held with the various Parish Administrators with a view to obtaining the nomination of the trainees (Extension Officers), two per parish. Trainees/participants were identified after which they were briefed on the arrangements for the course and were advised on the course content. Domestic arrangements were made with the Management of the Catering Division of the Training Centre. The course, lasting for two weeks, was held at Eltham, St. Ann, at which trainees numbered 26, lecturers numbered 19 and senior agricultural personnel of MINAG numbered 11. There were also participants from the Netherlands Government who are presently executing a Physical Planning Project in the Western region of the country.

2.4.2.7 Activity IV.XLJ.1.1.7 - Up-grading of technicians on the marketing system for the purchase, handling and distribution of hillside agricultural products in Jamaica. This activity was intended to:

- develop and institutional framework capable of implementing similar changes in other areas of the country; and
- train local professional technicians.

2.4.2.7.1 Activity IV.XLJ.1.1.7 was implemented to provide background information which would be used in a marketing seminar. Arrangements were made with MINAG and Gerry La Gra for the latter to present a seminar to personnel involved in the marketing of hillside food crops. In the preparation for the seminar, Mr. La Gra reviewed existing documents and held discussion with various agencies in MINAG and elsewhere. A paper titled "The Higglers" was used.

2.4.2.7.2 At the request of MINAG the planned seminar was changed in scope to that of a round table discussion to include only high echelon personnel of MINAG and other institutions which are involved in projects which have elements of marketing. Prior to the round table discussions IICA arranged for and was involved in meetings between IDB, USAID and MINAG and set the stage for subsequent follow-up action. A basis paper titled "Elements of an Agricultural Marketing Strategy for Jamaica" was submitted to the participants of the round table talks.

2.4.2.8 Activity IV.XLJ.1.1.8 - Strengthening of the Soil Conservation Division of MINAG. This activity was aimed inter alia at providing opportunities to the Director of the Soil Conservation Division of MINAG to observe soil conservation programmes and procedures in Central America as a means of broadening his horizons in the area.

2.4.2.8.1 Arrangements were made with IICA/Venezuela and IICA/Costa Rica to facilitate the visit of the Director of Soil Conservation, Jamaica. The Director visited CIDIA, the University of Los Andes, as well as Soil Conservation works in Venezuela. By invitation of Manuel Paulet



2.4.2.5.2 Four field days were arranged for the trainees/ participants on the following subject matters:

- i) Soil Types of Jamaica;
- ii) Integrated Rural Development (Pindars River/Two Meeting Watershed)
 - a. Soil Conservation Works;
 - b. Implementation of Farm Plans;
- iii) Rural Planning; and
- iv) Cropping Systems Research on Terraced Lands at Allsides Trelawny (GOJ/IICA Hillside Development Project).

In addition to the formal classroom lectures and field days, trainees participated in two workshops, namely:

- a) Rural Planning; and
- b) Planning Cropping Systems

2.4.2.5.3 Resulting from the residential short course mentioned above a paper - the Proceeding of the course - has been published.

2.4.2.6 Activity IV.XLJ.1.1.6 - Studies on marketing of principal hillside products. This activity was intended to develop accurate production and marketing figures for crops grown by the small hillside farmer at Allsides.

2.4.2.6.1 Four professionals of MINAG were selected to assist in the execution of the activity, and specifically in the preparation of documents on the production and marketing of onions, red peas, peanuts, and irish potaotes. Outlines of the studies were prepared. Relevant data and information were collected from the following sources:

- a) existing publications - official and non-official;
- b) marketing outlet and production points;
- c) farm surveys and discussion with farmers.

As a result two documents dealing with the production and marketing of peanuts and red peas were prepared.

- i) visited the Soil Conservation Experiment Station at Smithfield;
- ii) participated in a round table discussion with the staff of the Soil Conservation Division and IICA/Jamaica;
- iii) visited Olive River to recommend potential alternative methods of soil conservation other than terracing.

Regrettably, these recommendations were not made

2.4.2.9 Activity IV.XLJ.1.1.9 - Promotion of domestic use of hillside products and aimed at increasing food production and farm income, improved nutrition and the standard of living of approximately 300 farm families occupying about 622 acres of hilly land in the Parish of Trelawny.

2.4.2.9.1 Discussions were held with Home Economists from MINAG and arrangements were made for the activity to be carried out at Allsides and its environs. MINAG assigned two Home Economists based in Trelawny to assist with the activity. The Home Economists obtained equipment for use in preparing various foods. A number of seminars and demonstrations were held between the Home Economists and trainees. Approximately 170 adult females and 11 female students were involved in the application of alternative methods in the preparation and use of hillside products. Due to the positive response from farm wives of the area these seminars are now featured on a monthly basis.

2.4.2.10 Activity IV.XLJ.1.1.10 - Seminar on tree crops in hillside farming in Jamaica. The aims of this activity are:

- To increase food production and farm income, improve nutrition and the standard of living of approximately 300 farm families occupying about 622 acres of hilly land in the Parish of Trelawny; and
- to train local professional technicians.

2.4.2.10.1 Discussions were held with the Training Division of MINAG to develop the broad outlines of the proposed seminar for subsequent discussion with CATIE. Requests were made to CATIE to obtain the technical assistance of Messrs. Budovsky and Sylvain. For reasons still unclear to us, CATIE's participation could not be secured. Thus the course

outline was finalized involving all national lecturers. Speakers were identified, contacted and requested to present their respective course material. Arrangements were made with administrative heads of the four regions for selection and nomination of course participants. Domestic arrangements were made with the management of the Catering Division of the Training Centre. The course, lasting for three days, was held at Twickenham Park Training Centre, Spanish Town. A total of 85 participants received training from 16 specialists in the following areas: avocado, banana, citrus, coffee, coconut, cocoa, mango, ackee, naseberry, sweet-sop, sour-sop, breadfruit, soil fertility and land capability classification.

2.4.2.10.2 Additionally, a workshop was held to ascertain the problems of tree crop culture in Jamaica, and to recommend solutions.

The proceedings of the seminar have been compiled and published.

2.5 Year Three (July 1979-June 1980)

2.5.1 Due to the change in the budgeting system of IICA, as well as to the fact that the first phase of the National Project was scheduled to end in June 1980, the activities for the period totalled eight. The execution of six of these activities began during the first sub-period (July-December, 1979) and were continued during the second sub-period with the addition of two others.

2.5.2 The activities, their respective objectives and results to date are catalogued as follows:

2.5.2.1 Activity IV.XLJ.1.1.1 - Third year establishment and maintenance of observation and demonstration plots on systems best adapted to hillside agriculture, aimed at further developing and refining production systems for newly terraced lands.

2.5.2.2 The promising cropping systems which resulted from the first two years of work have been and continue to be validated on a semi-commercial scale at the demonstration centre and on farmers' holdings.

2.5.2.2.1 Results have shown that the overall project goals of increasing

- i) productivity,
- ii) farmer income,
- iii) nutritional levels and
- iv) rural employment are now attainable at Allsides.

These results have constituted the bases for determining the economic viability of the PHILAGRIP Project, which will extend Allsides by an additional 450 hectares.

2.5.2.2.2 In consequence of the data obtained at Allsides, MINAG's high level policy makers have expressed their satisfaction with the achievements of the project so far. This is underscored by the official request of MINAG for an extension of the project. The target group -the Allsides farmers has become increasingly convinced of the benefits to be gained in adopting the newly developed technology.

2.5.2.2.3 MINAG, recognizing the weakness and constraints of its agricultural extension in transferring the newly generated technology, requested both the Director General and Guillermo Guerra to provide a full-time Extension Specialist for the IICA/Jamaica office to reinforce and strengthen the necessary transfer of technology. This technical assistance was approved by the Director General during a meeting with the Minister of Agriculture in November 1979. IICA/Jamaica has subsequently prepared the terms of reference for this specialist. IICA Headquarters presented a list of C.V.s to IICA/Jamaica for the selection of a specialist. This has been done. The appointment of this expert is awaited. In anticipation of the necessity to upgrade the extension element of the project, a baseline document has been prepared on the subject of Extension.

2.5.3 Activity IV.XLJ.1.1.2 - Establishment of demonstration plots for farming systems treated with soil conservation methods other than terracing. This activity was aimed at establishing soil conservation treatments other than bench terracing for the development of intensive cropping systems on hillside lands.

2.5.3.1 In executing this activity,

- i) considerable time and effort were devoted to the identification and procurement of a suitable test site. This culminated in a site being identified at Olive River in the Parish of Trelawny;
- ii) additional time was spent in preparing a lease agreement between the lessor, MINAG and IICA;
- iii) a final agreement was eventually signed on March 14, 1980;
- iv) in the interim on the basis of the verbal agreement between the lessor (Derrick Smith) and the lessee (MINAG) permission had been given to proceed with the infrastructural development of the project site;
- v) the land was made available for cropping at the time of reaping by the lessor of his established crops;
- vi) the soil conservation measures other than bench terracing have been implemented, and the remainder of the area has been planted out to the crops which will be used for further demonstration. During the months of May and June two farmers field days have been held for the purpose of:
 - a. creating awareness of the purpose of the project; and
 - b. demonstrating what has already been done.

A total of 156 persons including farmers and their wives attended.

2.5.3.2 This activity benefitted from technical assistance provided by a Korean expert who came to Jamaica as a result of a joint agreement between MINAG/Government of Korea/IICA/Jamaica.

Already results have demonstrated the benefits of soil conservation and farmers are taking a keen interest in the project.

2.5.4 Activity IV.XLJ.1.1.3 - Demonstrating the viability of promising farming systems on selected farmers' holdings within the project development area, and strengthening the role of extension. The objectives of this activity are:

- to reinforce the role of agricultural extension in the project area; and
- to increase the productivity and production of certain food crops (yams, beans, potatoes) on farmers' plots;

2.5.4.1 In carrying out this activity:

- meetings were held between technicians and farmers to determine their field needs, and to determine a strategy of assisting them;
- farmers indicated that through a co-operative mechanism it would be easiest to transfer technology on to their holdings;
- a pre-cooperative organization was established with the co-operation of the Department of Co-operatives;
- a committee was selected by the farmers and accommodation was procured;
- a manager for the co-op was selected and trained; and
- through the pre-cooperative a mechanism to ensure the availability of badly needed inputs has been created.

2.5.4.2 So far technical assistance has been provided to 15 of the 20 selected farmers for specific demonstrations. As a result of this activity a document was prepared on the Allsides farmers pre-cooperative. Notwithstanding the achievements detailed above, the rate of adoption of the improved farming practices is being seriously hampered due to the fact that the extension specialist has not been appointed.

2.5.5 Activity IV.XLJ.1.1.4 - Reinforcement of the operative units at Allsides in the areas of hillside farming technology, programming, co-ordination and management. This activity is aimed at providing continued support towards the development of an institutional framework capable of implementing changes similar to those at Allsides in other areas of the country.

2.5.5.1 The following was effected:

- i) field days were held for national technicians who received intensive training on various aspects of soil conservation and cropping systems;
- ii) monthly meetings were and continue to be held with standing members of the Co-ordinating Committee set up to ensure smooth execution of the project.

This committee consists of the:

- Deputy Director, Western Division;
 - Parish Manager, Trelawny;
 - Project Extension Officers;
 - Project Agronomist;
 - Project Home Economist; and
 - IICA/Jamaica professional staff;
- iii) technicians of their hillside soil conservation projects e.g. from USAID, FAO-Norway/GOJ, Netherlands/GOJ visited frequently for observation and advice.

2.5.5.2 As a result of this activity

- i) personnel of the operative unit obtained reinforcement in their skills;
- ii) improvement in the co-ordination of the project was obtained; and
- iii) there was an increase in the willingness of various technicians to become involved in similar projects elsewhere.

2.5.6 Activity IV.XLJ.1.1.5 - Reinforcement of expertise in soil conservation and watershed management. This activity is aimed at:

- i) assisting the Soil Conservation Division to improve and consolidate measures for developing appropriate technology for newly terraced lands and hillsides which have been subjected to alternative soil conservation measures, e.g. hillside ditch, orchard terrace, individual basins, grass barriers, etc.; and

- ii) assisting the promotion and generation of other soil conservation project profiles.

2.5.6.1 In carrying out this activity the following was done:

- i) following intensive negotiations a soil conservation expert was secured jointly by GOJ, the Republic of Korea and IICA;
- ii) the Korean technician became involved in the execution of this activity;
- iii) training has been provided in soil conservation to two GOJ technicians and 25 farmers of the area;
- iv) for additional information refer to achievement under activity IV.XLJ.1.1.2

2.5.7 Activity IV.XLJ.1.1.6 - Evolving systems for obtaining data and information on agro-socio-economic indicators of hillside farmers. The objectives of this activity are to:

- develop accurate production figures for crops grown by the small hillside farmer;
- obtain wider, clearer and more accurate knowledge of the value orientations and farmers' receptivity to:
 - (1) soil conservation measures;
 - (2) new farming technology;
 - (3) modern marketing approaches; and
 - (4) encourage farmers to use simple records.

2.5.7.1 Work on this activity has so far resulted in:

- i) the selection of an area adjacent to Allsides in the Martha Brae Watershed in Southern Trelawny. This same area has been chosen by MINAG for the Pilot Hillside Agricultural Project (PHILAGRIP) being financed by IDB;
- ii) the designing of an appropriate questionnaire which was used for obtaining 'universe' information for this area;
- iii) the acquisition of estimates of the number of farmers;

- iv) the assessment of slopes and soil types;
- v) the designing of a questionnaire for the undertaking of an Agro-Socio-Economic Survey of the area, which was also field tested and finalized;
- vi) the conduction of the Survey with assistance from MINAG;
- vii) the collation and tabulation of the data; and
- viii) the preparation and publication of a comprehensive report.

2.5.7.2 The results of this Survey constitute one of the bases for the preparation of the PHILAGRIP Project Document.

2.5.8 Activity IV.XLJ.1.1.7 - Preparation of a comprehensive report on the research and development data obtained during the first phase of the Allsides Pilot Development Project. The purpose of this activity was to prepare a technical report at the end of the first phase of the project.

2.5.8.1 Preparation of this report has begun, and selected results have been incorporated in the PHILAGRIP Project Document. A seminar titled "Pensando de la generación del futuro" was presented at IICA Headquarters in March 1980.

2.5.9 Activity IV.XLJ.1.1.8 - Strengthening of marketing institutions. The purpose of this activity is to monitor weekly prices paid for hillside agricultural products in the Christiana market which is a major outlet for products grown in the Allsides area. The execution of this activity will have a threefold effect:

- i) to provide price scales which will assist in determining seasonal market trends;
- ii) to furnish price information to farmers of the Allsides project. This will guide them in the setting of farm-gate prices for higgiers; and
- iii) to provide basic data for the development of a marketing information service for all products grown in the project area.

2.6 Appropriateness of Resource Use in Attaining Project Objectives

2.6.1 The activities detailed for years one, two and three of the National Project made excellent use of the resources available to the project. As evidenced in the previous sections of this report, a total of 41 activities were programmed and successfully executed during the first phase of the Project (1977-80). Further, the IICA/Jamaica professional staff in collaboration with MINAG professionals published 22 technical documents totalling 2206 pages during the execution of the first phase of the Project. These publications pertain to hillside agriculture in Jamaica and have been widely distributed within and beyond Jamaica.

Several papers have gained prominence as essential reference material for national planning and policy decision making, while others are used for training of technical personnel involved in other similar hillside development projects. It is worthwhile recalling the two main constraints which affect the execution of this and any other project in Jamaica today. These constraints are:

- i) budgetary; and
- ii) the on-going reorganization of MINAG.

2.6.2 In spite of the above constraints, the nature and composition of the activities were not altered. However, it was necessary to effect certain modifications in scope due to inability to obtain all the programmed local counterpart resources (manpower and financing).

2.6.3 Arising from 2.6.2 this required IICA/Jamaica to be innovative in its endeavours to achieve the project goals.

2.6.4 It must be recalled that during the initial stage of project implementation there were significant changes and reduction in the IICA project staff, in terms of both direction and the technical personnel. Notwithstanding this, the project performance was not significantly affected.

2.6.5 The activities showed continuity and consistency at all times in terms of the target vis a vis the project objectives.

3. Impact of IICA's Project Activities and Goals on National Institutions

3.1 MINAG has used to advantage the results obtained from the project. The premises used in the development of the project and the design of project achievements, created during the first year of the project the basis for the preparation and implementation of the USAID Pindars-Two Meetings Project (Integrated Rural Development Project). The technical component of this project was to be contracted to IICA by recommendation of the first USAID agricultural experts who visited Jamaica to discuss that project (Charles Brightenbach and Peter Brittner).

3.2 This project has a total value of US\$26 million. Additional mileage was gained by MINAG from the SBF Allsides project during the preparation of the GOJ/Norway Project. This project was later implemented as the GOJ/Norway/FAO Project because Norway does not provide bilateral assistance and it works through institutions of which the country is a member, e.g. FAO. This project has a total value of \$2 million, in the first instance, and is at present dedicated to the training of agricultural technicians in soil conservation and systems of crop production.

3.3 The long and extensive discussions with the IDB culminated in January 1980 with the signing of another project which is predicated on the "Allsides technology". This is the GOJ/IDB/IICA Pilot Hillside Agricultural Project, PHILAGRIP, which in its first stage will cost approximately US\$8.4 million.

3.4 At present IICA/Jamaica has initiated discussions with GOJ, the Honourable Prime Minister (and Minister of Agriculture) and now with the Embassy of Venezuela for the preparation and financing of a National Peanut Project for Jamaica. This was based on the successful results of peanut trials on terraced lands and under improved mixed cropping systems at Allsides. It is envisaged that this project will lend to an increase in farm income, a reduction in imported oils and animal feed ingredients, and a saving in foreign exchange.

3.5 Prior to the implementation of the Allsides Project, there had been a dearth of knowledge on appropriate farming techniques which could be adopted by hillside farmers in a manner which would accommodate intensive cropping systems on soil-conserved lands. The principal objective of the national project, was to develop a body of knowledge designed to change the traditional pattern of farming in Jamaica on terraced lands. Consistent with this, the research and development efforts during the first phase of the project have amply demonstrated that it is now possible to obtain the targets of:

- increased farm income;
- increased on-farm employment;
- increased production and productivity;
- improved nutritional profile; and
- saving of foreign exchange.

3.6 This improved technology has been adopted by GOJ as an important element in formulating projects which will improve Jamaica's agricultural image and attract project financing from international agencies.

3.7 All the important and sensitive institutional variables have been positively affected by these activities. MINAG, as the source of normative policy making for the Agricultural Sector has accepted the criteria and technology of hillside farming which is influencing all the institutional variables. MINAG is allocating resources for the development of more and larger hillside farming projects, which will form the main body of a National Hillside Farming Development Project.

3.8 National and higher echelons of MINAG are aware of the need and urgency of hillside farming projects. However, the rate of execution is inhibited by inadequacies in the following areas:

- i) identification of conditions specific to each potential project area for the whole country;
- ii) studies of parameters and other elements for a sound food production-soil management hillside project;
- iii) financing and human resources necessary for project preparation;
- iv) identification of international sources for project financing; and
- v) identification, budgeting and allocation of scarce national resources for counterpart services.

3.9 Among the indicators to be used for assessing levels of success in project areas are, inter alia:

- i) ecological factors;
- ii) physical features;
- iii) production potential;

- iv) variety of crops which may be produced;
- v) income generation potential;
- vi) employment potential; and
- vii) nutritional profile, all of which have been positively affected following three years of implementation of the national project.

4. Review of External Factors Affecting Progress on Project Activities

4.1 There have been significant changes with respect to the availability of support services of GOJ in the implementation of the project. These changes have to a large extent been necessitated by budgetary constraints and by MINAG's continuing reorganization. These changes have reflected mainly in inadequacies of counterpart funds and manpower, particularly in relation to:

- construction of soil conservation measures; and
- provision of extension input.

4.2 During the first 18 months of the project, difficulties were experienced in obtaining a permanent core of experienced counterpart staff at the project site on a continuing basis. This situation impeded the initial rate of development of the project. However there has been considerable improvement since then.

4.3 As the work of the project unfolded and its potential benefits became apparent, GOJ's acceptance of and resource deployment to this project increased.

4.4 It has been stated in various sections of this document that the greatest constraint is the budgetary allocation. Our chief counterpart agency - the Soil Conservation Division, not unlike other Division of MINAG, has also been affected by this constraint.

4.5 At different levels, the farmers are the direct beneficiaries and the GOJ the indirect beneficiary, both of whom have been positively affected. Indicators of this acceptance are:

- i) at farmer's levels - the rate of adoption; and
- ii) at GOJ's level - the use of the experience gained at Allsides in formulating similar or parallel projects.

4.6 The socio-political realities of Jamaica today indicate that more agricultural developmental projects which are predicated on Allsides be mounted to alleviate the problems of:

- a) high open unemployment which at the time of this preparation exceeds 40% of the sectoral labour force;
- b) low small farm income; and
- c) low nutritional levels of rural families.

May 15, 1980

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AIDE MEMOIRE

EVALUATION OF FSB IICA/JAMAICA PROJECT

1. The Evaluation Team comprised of:
 - Drs. Hugo Cohan and Rufo Bazan, who arrived on Sunday June 1, 1980.
2. The Evaluation Team met the IICA/Jamaica staff on Monday June 2nd as was originally programmed.
 - 2.1 At the beginning of the discussions IICA/Jamaica presented the Evaluation Team with Documents Nos. 2 and 3, and received Document No. 1. The tentative schedule of work for the week was discussed and agreed upon.
 - 2.2 The IICA/Jamaica Team comprised:
 - Dr. Percy Aitken-Soux;
 - Dr. Abdul Wahab;
 - Dr. Irving E. Johnson; and
 - Dr. B. Woo
3. Following a review of the documents by both teams it was the consensus that Document No. 1 had to be completed, on the provision of appropriate information by the Jamaica office. This information was provided during the course of the week.
 - 3.1 Documents Nos. 2 and 3 were found to be in compliance with the guidelines of the Official Methodology provided by the Evaluation Office.
4. In accordance with schedule, the documents were reviewed, interviews were held, field days were attended, and working sessions held.
 - 4.1 A detailed review of the original Project Document was effected as well as reviews of budgets covering the life of the project, its activities, reports and other relevant information.
 - 4.2 Inter alia a review of the creation and working of the Co-ordinating Committee was made and the minutes of these meetings were made available. Additionally, Dr. Wahab presented a seminar on some of the achievements of the FSB Project.

4.3 During the final joint sessions, several considerations and recommendations were agreed upon. These are listed as follows:

4.3.1 The Evaluation Team congratulated the Jamaica Office for the design and execution of the Project. Special mention was made to Dr. Raul Soikes for his role in the identification and conceptualization of the Project. Further, the achievement of a clearly identifiable product constitutes a tangible proof of IICA's efforts in Jamaica. Through this product IICA has gained credibility for its capacity as an Agency for technical co-operation.

4.3.2 Furthermore, the Office has been able to generate new projects in other Lines of Action which emanated from the FSB Project. Through the IICA's achievements at Allsides, national institutions have also been able to generate new projects on hillside farming with external financing from several sources (GOJ/USAID Rural Integrated Development Project, GOJ/IDB/IICA Pilot Hillside Agricultural Project (PHILAGRIP), GOJ/FAO/Norway Hillside Project, the proposed Venezuelan/GOJ/IICA Peanut Project (VENAPEPOJ).

5. Recommendations:

5.1 The continuation for 18 months of the FSB Project has already been approved by IICA at the request of MINAG. During the first six months of the extension period (July-December, 1980), a total of seven activities has been programmed as presented in addendum to Memorandum ZL/J-064 of February 4, 1980, from P. Aitken to G. Guerra. As can be seen, the most important new activity concerns the establishment of commercial production plots on selected farmers holdings. This will serve to validate successful farming systems from the Allsides demonstration project, under direct farmer's management.

5.2 It is noted that the original objectives and goals as spelled out in the Agreement with the GOJ.

- a) did not clearly identify the IICA and MINAG's responsibilities;
- b) were too optimistic in terms of transfer of technology;
and
- c) gave IV when in fact it only deals with production systems research as a pre-requisite for increasing food production on the hillsides and enhancing small farmers' income.

5.3 It is suggested that new activities be added to the 1981 programme to deal with:

- a) the preparation of a comprehensive final report on the

Allsides and Olive River experiences; and

- b) the preparation of blueprints for the transfer of the demonstration farms to MINAG including a proposal of priorities for future adaptive research for the two locations.

5.3.1 It is also recommended that another project similar to Allsides should be prepared in 1981 for funding and implementation in another ecological zone within the context of hillside farming. For this new project the transfer component should be carefully planned.

5.4 The PANP clearly shows that the highest ranking priorities are:

- a) food production; and
- b) rural employment.

5.4.1 The solution to these problems involves a series of Government activities such as:

- a) land tenancy;
- b) credit and credit insurance;
- c) marketing and distribution;
- d) price policies;
- e) agroforestry;
- f) rural industrial processing; and
- g) farmers' organizations

5.4.2 The FSB Project is not intended to assist the GOJ to develop all these activities.

5.4.3 For this reason it is recommended that the Jamaica Office explore the possibility of developing projects aimed at assisting national institutions in effecting solutions to priorities as stated in 5.4.

5.4.4 It is also recommended that new projects be consistent with hillside agriculture. Activities such as the ones

already started in Marketing and Farmers' Organizations appear to fit very well with this recommendation.

- 5.4.5 Along these same lines it is very strongly recommended that the commitment of the Direccion General to recruit an Extension Specialist for Jamaica be complied with in the very near future due to the dire need to reinforce activities in transference of technology. As soon as this vacancy is filled the Jamaica Office will need to programme the activities that this expert will be expected to perform. In order to make this input from IICA meaningful it is imperative that MINAG should not cease its endeavours to provide adequate Extension Agents for this project.

SC/AP-066

9 de junio de 1980

A : Enrique Blair, Sub-Director General Adjunto de Planificación
DE : Hugo E. Cohan, Jefe División de Políticas y Planificación Prospectiva
ASUNTO: Informe de viaje a Jamaica

1. Conforme a sus instrucciones, estuve con Rufo Bazán en Jamaica del 1 de junio al 7 de junio. Este viaje no programado fue para reemplazar al Dr. Lombardo en el equipo de evaluación del Proyecto FSB-"Allsides" (o ahora, "AllSides-Olive River").

2. El proyecto me pareció excelente porque:

- a. Generó un producto IICA bien identificable,
- b. da información vital para atender problemas prioritarios de Jamaica,
- c. permitió al Gobierno generar varios proyectos similares,
- e. ha generado reconocimiento y respeto técnico al IICA del Gobierno y de otros organismos internacionales.

3. Por ser un proyecto de generar información tecnológica, tiene las consabidas limitaciones: cómo llegar al productor, cómo resolver todos los problemas que frenan el desarrollo rural del país. La misma extensión, que fue responsabilidad del Gobierno ha funcionado lentamente. Pero el proyecto FSB hizo con honores lo que, pese a algunos puntos oscuros del Convenio, se propuso hacer.

4. Con Bazán, pensamos incorporar sugerencias y comentarios más detallados al elaborar el Documento N°4 de Evaluación. Entre otras cosas, exploraremos los datos que tiene Juan Antonio Aguirre. Por ahora creo bastan: copia de la ayuda memoria que terminamos rápidamente el viernes pasado en Jamaica y algunas ideas que incorporó a continuación.

5. El Dr. Wahab debiera pasar un tiempo, tal vez en San José, ordenando su material y preparando un audiovisual que permita al IICA y al FSB obtener el crédito que merecen.

6. La Oficina en Jamaica debe incorporar un experto en extensión, conocedor del hasta lingüísticamente difícil productor local. "Extensión" debiera

el paper de Guadalupe que usted conoce. Tal vez un consultor de medio año permitiría a la Oficina definir su proyecto, con especial atención a qué puede y quiere hacer efectivamente el Gobierno. Hoy existen varias hipótesis sobre qué limita la adopción, las que deben aclararse antes de comprometer un proyecto en el tema.

7. Simétricamente, creo que el Dr. Wahab debiera ir concretando recomendaciones, en contacto con este extensionista.

INFORME DE VIAJE

1. Información General

a. Nombre del Técnico	Rufo Bazán
b. Unidad de Dependencia	Comité de Trópicos
c. Unidad Asistida	---
d. Lugar donde viajó	Jamaica
e. Año Fiscal 1980	De junio 1 a junio 8

2. Objetivo del viaje

Participar en la Evaluación del Proyecto Allsides

3. Síntesis de la labor realizada

La misión se realizó en conjunto con el Dr. Hugo Cohan.

La labor se ajustó a un calendario preparado por la Oficina IICA/Jamaica y puesto a consideración de los "evaluadores".

El calendario constaba de las siguientes partes:

- estudio y discusión de documentos
- visitas de campo
- entrevistas a funcionarios de oficinas nacionales internacionales
- discusión final de conclusiones y recomendaciones

Como primera medida se hizo un estudio de los Documentos 1, 2 y 3, que son requisitos para la Evaluación; el primero fue preparado por la Oficina de Evaluación, Sede Central y no reúne las condiciones como para ser incluidas en el Documento Final de Evaluación; adolece de fallas que deben ser corregidas, además de una revisión cuidadosa.



Los otros documentos fueron preparados por la Oficina IICA/Jamaica, y por cierto que en muy buena forma, con el detalle necesario, demostrando así que hubo una revisión meticulosa de información existente para su preparación.

Otros documentos conocidos fueron las publicaciones que la Oficina IICA/Jamaica ha estado preparando relacionadas con el Proyecto Allsides (24 en total), los cuales en conjunto hacen una colección valiosa por la información contenida.

La visita de campo al Proyecto Allsides se la combinó con un "field day" con un gran número de invitados de personeros de agencias internacionales, representantes nacionales, algunos agricultores y estudiantes universitarios.

La visita permitió ver de cerca el estado de la investigación, pero más aún, evidenciar el alto grado de interés que se tiene a nivel nacional por el Proyecto ; donde los comentarios son siempre muy favorables, reconociéndose así la capacidad adquirida por IICA en hill-side farming. Igualmente permitió ver el experimento recientemente instalado en Olive River, próximo a Allsides, donde se estudian otras alternativas en materia de conservación de suelos, como se detalla más adelante.

Otra acción realizada en el campo fue entrevistas a algunos agricultores del área y los Agentes extensionistas ligados al proyecto (1 en conservación de Suelos y 1 en Agricultura). Entre los funcionarios nacionales entrevistados están aquellos personeros que de una u otra manera están o han estado ligados al Proyecto Allsides, o por lo menos tienen conocimiento y se mantienen informados sobre el particular; por ejemplo: el Dr. Stone; Secretario Permanente; Sr. R. Russell, Director Data Bank and Policy Review Division; Sr. D. Henry, Extensión Division Chief, MAG; Sr. R. Baker, Director Crops and Soils, MAG; Sra. G. Barker, Crops and Soils Division, MAG; Sr. J. Suah, Director CARDI/Jamaica.

De representantes de Agencias Internacionales se visitó solamente al del BID en relación con el Proyecto PHILAGRIP.

Finalmente y considerando aspectos relevantes de la evaluación, se elaboró, con Aitken, Wahab y Johnson, una Ayuda Memoria, que se adjunta como Anexo 4 al presente informe.

4. Comentarios

Aspectos generales

El proyecto en sí desde el punto de vista de conceptualización, diseño e implementación a nivel de campo, ha sido muy exitoso y es fácil evidenciar el impacto que ha tenido en los niveles oficiales, donde se reconoce con amplitud la capacidad de IICA en hill-side farming, a la vez que le dan una gran credencial para intentar otros proyectos. El impacto a nivel de agricultor resulta más difícil de apreciar, ya que sería necesario efectuar un buen número de entrevistas para definirlo; lo propio sería a nivel de técnicos nacionales.

En su fase operacional y especialmente a nivel de campo, la acción de la oficina IICA/Jamaica se sale del común denominador de la política IICA, en el sentido en que, por las circunstancias reinantes, la acción IICA fue no solamente de decir qué es lo que debe hacerse, sino que fue más allá, o sea al cómo hacer; y sin duda que esta acción fue la decisión en el éxito alcanzado por el Proyecto, y también en crear entre los nacionales el respeto y reconocimiento de capacidad que se tiene hacia IICA.

Un hecho importante que se detecta en la Oficina IICA/Jamaica es que el Proyecto Allsides constituye el pilar de sus acciones en el país, y puede decirse que sus actividades generales giran alrededor del Proyecto Allsides; en tal condición es difícil encontrar una línea de separación entre el proyecto IICA y el proyecto país; no creo que este hecho sea criticable, ya que la acción de IICA en este caso se ajusta plenamente a las condiciones y necesidades del país, aunque es posible que en este caso, nos alejemos del común denominador de la política IICA.

Los objetivos del Proyecto fueron bastante optimistas y lógicamente no han sido del todo cumplidos, por ejemplo en lo que se refiere al número de familias a ser impactadas por el Proyecto, o en los aspectos de fortalecimiento institucional, donde juegan un papel importante otros factores fuera del control del Proyecto, o sea aquellos relacionados con políticas de organización del país, etc.

El objetivo principal que era de desarrollar tecnología para hill-side farming, fue ampliamente cumplido, aún considerando el breve tiempo disponible, 3 años, y con todas las limitaciones de personal técnico etc.; de manera que en este momento se dispone como resultado un sitio experimental donde se ven cosas, se las puede evaluar, la gente puede estudiarla, verla, comentarla, etc.

Sin embargo llegado este punto, la preocupación debe ser de cómo hacer que los resultados obtenidos tengan el impacto que merece a nivel de país, sobre este particular más adelante se discute en más detalle.

Más aún, la preocupación debe tocar otro punto importante y es el relacionado con el paso del Proyecto al MAG para su manejo y continuidad de acciones cuando el Proyecto salga de las manos de IICA, al término del financiamiento F.S.B.

Otro aspecto importante observado y que tiene relación con el impacto del Proyecto, es que ha servido para generar varios otros proyectos similares a Allsides en sus líneas generales, pero manejados por otras Agencias; como AID, FAO, Gob. de Noruega y otras. Es de esperar que estos otros proyectos de mayor financiación que Allsides, sean de éxito, aunque hasta el presente los hechos no son nada halagadores.

Otros detalles específicos del Proyecto se presentan en el Documento 4, que comprende en realidad las observaciones y comentarios resultantes de la evaluación y que está en preparación a cargo de H. Cohan; de manera que sería innecesario repetirlos en el presente informe.

Aspectos técnicos

Técnicamente el Proyecto Allsides ha tenido un desenvolvimiento adecuado, en el sentido de que habiéndose iniciado a nivel de campo probando alrededor de 14 diferentes sistemas alternativos, en el curso de 3 años, éstos fueron sometidos a un proceso de selección, desechando aquellos "no funcionales" como los sistemas que incluían maíz y hortalizas y mantener los más primos, que en número de nueve (9) se encuentran ahora en pruebas adicionales de campo.

Aparte de la selección de sistemas, considero otro acierto el pasar de pruebas en parcelas pequeñas (3 x 5 o 4 x 8 m) a pruebas en parcelas mayores (405 m²).

Precisamente es con base en resultados obtenidos en este tamaño de parcela que J.A. Aguirre efectuó sus estimaciones económicas, que a su vez están siendo utilizadas para la preparación del Proyecto ampliatorio a ser presentado al BID.

Con base en los dos puntos anotados, selección de sistemas y ampliación de tamaño de parcelas experimentales, puede aceptarse que el proyecto cumplió uno de sus objetivos y quizás el principal, que es el de desarrollar nuevos sistemas de producción basados en cultivos múltiples y hacer un uso eficiente de los recursos tierra y agua.

Es decir, se tiene un buen conocimiento de la agricultura en laderas y de sistemas de producción aplicables a esas condiciones conducentes a mejorar y/o cambiar los patrones tradicionales de agricultura en laderas.

Sin embargo, conviene hacer algunas aclaraciones con el propósito de dejar claro que dadas las condiciones limitadas de tiempo y de personal técnico, el proyecto concentró sus acciones de campo a una fase de la experimentación en sistemas, que es la de definir sistemas promisorios; dejando de lado otras fases, principalmente la referente a pruebas de estabilidad de sistemas, de manera que las recomendaciones generadas para

uso del agricultor comprendan no solamente los elementos agronómicos usuales como semillas, población, insumos, etc., sino también el aspecto de tiempo de uso del sistema o en otras palabras el número de ciclos de cultivo en los cuales un mismo sistema puede mantener una producción estable.

Este aspecto es importante si consideramos que los agricultores en terrenos de laderas poseen unidades de producción inferiores a 2 ha. en tamaño, y por tanto difícilmente están en condiciones de cambiar sus sitios de cultivos en la frecuencia que lo hace un investigador y por el contrario cultivan un mismo sitio en forma continuada, quien sabe por cuantos años. Bajo estas condiciones, un componente de la recomendación al agricultor es sin duda el tiempo durante el cual podrá hacer uso de un sistema.

Consecuentemente otro aspecto ligado al anterior es la definición de secuencias o rotación de sistemas; con participación de leguminosas forrajeras y otras especies con características de mejoradoras del suelo y aportadoras de materia orgánica; repito que esta fase experimental no ha sido aún intentada, principalmente por las limitaciones antes mencionadas.

Otro objetivo cumplido con amplitud ha sido el de capacitación de personal nacional en aspectos de campo relacionados con el proyecto; diversos informes de progreso mencionan el número de días de campo llevados a cabo y el número de participantes en cada caso, sean estudiantes, técnicos o agricultores; además de días de campo se han generado seminarios y eventos técnicos como otros mecanismos de capacitación. Lamentablemente, está fuera de control del proyecto el determinar el real impacto de esa capacitación; un hecho es evidente, y es el siguiente: el proyecto de su inicio al presente ha tenido, en forma sucesiva, 4 contrapartes del MAG como responsables del proyecto a nivel de campo; tres de ellos, una vez que adquirieron conocimientos y prácticas, fueron absorbidos por la Empresa Privada, el cuarto es el actual "field project manager".

Otros objetivos del proyecto relacionados con el fortalecimiento institucional y con transferencia de tecnología, en primera instancia a las 300 familias dentro de las 622 acres de tierras de ladera en el condado de Trelawory (sede del Proyecto), no han podido ser cumplidos en toda su magnitud, nuevamente debido a causas fuera de todo control del Proyecto. En el primer caso, la administración pública y especialmente en el Sector Agrícola, ha ido sufriendo cambios en su estructura que impide dedicar al Proyecto el apoyo necesario y suficiente, además de crear los incentivos como para asegurar la creación de la capacidad necesaria que a su vez permita en su debido tiempo absorber en forma íntegra la conducción del Proyecto. Consecuentemente, la conducción del Proyecto todo es mayormente por personal IICA, que dadas las circunstancias del caso, era la única alternativa para llevar adelante el plan de trabajo, y que a su vez permitió obtener el éxito obtenido.

En el aspecto de transferencia de tecnología, difícilmente el Proyecto por sí mismo hubiera podido cumplir lo previsto; por un lado, la misión principal era desarrollar los sistemas, pero para que éstos luego sean transferidos por lo menos a las familias en el área del Proyecto se requiere un mecanismo adicional basado en Extensión Agrícola, con una concepción clara del Proyecto y sus resultados; este mecanismo ha sido y es deficiente a nivel de país todo; basta indicar que la relación Extensionista/Agricultor es del orden de 1:600, sin mencionar otros aspectos como prioridades del Servicio de Extensión, etc. que definitivamente no están ligadas con las prioridades del Proyecto. El Proyecto cuenta con 2 Extensionistas, uno puesto por el Servicio de Conservación de Suelos y otro por el Ministerio de Agricultura, los cuales son insuficientes para la labor a desarrollar.

Se indicó que hay un número apreciable de agricultores del área que en diverso grado han adoptado alguna práctica aprendida en el Proyecto; pero aún es insuficiente dada la extensión en área y número de agricultores que podrían beneficiarse de las tecnologías generadas.

Es claro que en el momento actual se abren nuevas perspectivas para iniciar con más fuerza el proceso de transferencia de tecnología, con el proyecto PHILAGRIP sometido por IICA a consideración del BID, que engloba un área de aproximadamente 854 acres adyacentes a Allsides en la Cuenca Martha Brae. Considero que este aspecto de transferencia es el lógico complemento al Proyecto Allsides, ya que no es suficiente generar tecnología, como lo ha conseguido el Proyecto, pero debe recordarse que esta generación es en un área pequeña comparada con la extensión total del país; por tanto su impacto a nivel de mejoramiento de producción de alimentos será pequeño si aún, el Proyecto Allsides ocupa 622 acres en total (el área experimental ocupa 3 acres) dentro de lo que en Jamaica se denomina el "bread basket area", llamada así por ser un área cuyos suelos son los más productivos y por tanto ahí se concentra la región más productora de alimentos en el país. Estos suelos son de origen Sedimentario, de rocas pizarras, conglomerados y tobas, aunque con cierta influencia de formaciones de Galizas Amarillas.

Los suelos que se desarrollaron de estas rocas son profundos como característica física principal, y que desde el punto de vista químico son de muy baja fertilidad dado su avanzado grado de desarrollo y alta capacidad y alta capacidad de lixiviación, favorecida justamente por su excelente condición física. La profundidad de estos suelos aparece como la característica más favorable que permite el terraceamiento como medida de conservación y control de la erosión.

Un examen cuidadoso de mapas geológicos del país, nos muestra que la formación que origina los suelos del bread basket area es muy limitada, posiblemente apenas un 10 a 20% del área total del país. Esto significa que, aún cuando la topografía predominante en el país sea "hilly" o escarpado, ésta no es la condición fundamental para pensar que las condiciones de Allsides sean las mismas en todo lugar. En un mapa geológico

se puede apreciar claramente que la formación predominante es la Caliza Blanca (Sedimentaria), excepto, talvez, la proción Este del país donde predominan rocas ígneas y metamórficas como Andesitas, Porfiritas, Granodioritas, Serprentinas y rocas metomórficas no diferenciadas, siempre con afloraciones de caliza blanca.

Lógicamente los suelos que se desarrollen en las diversas regiones del país reflejarán las características del material parental del cual provienen. Es posible que pueda aducirse que el grado de desarrollo en general de los suelos es muy avanzado y les da cierto grado de similitud química, topográfica, etc., lo cual habría que tomarlo con cuidado. Por ejemplo, los suelos desarrollados de calizas blancas y aún próximos a Allsides muestran afloramientos rocosos, indicativo de suelos muy superficiales, en los cuales, posiblemente no se podrían reproducir los resultados de Allsides.

Estas consideraciones de orden geológico y edafológico hacen pensar en que la transferencia de resultados de Allsides será un proceso que requerirá una delimitación muy cuidadosa de áreas similares, tanto en el aspecto ecológico (precipitación y temperatura) como en el aspecto topográfico y edafológico. Indistintamente de estas condiciones técnicas, es verdad que los agricultores pequeños están regados por todo el país, siempre en condiciones de suelos en laderas; pero corresponderá a los técnicos delimitar las características de cada región antes de tratar de trasladar los resultados de Allsides sin hacer las adaptaciones del caso. El nuevo Proyecto PHILAGRIP se mantiene en suelos de condiciones similares a Allsides y por tanto la transferencia de resultados no será dificultosa. Sin embargo, y es en este punto en que se nota una debilidad del Proyecto, y es que hasta el presente, aún cuando se dispone de gran cantidad de datos y resultados de campo e información generada por computadoras, etc., no se han preparado recomendaciones concretas para su entrega al organismo responsable por la transferencia, que es el MAG, ni mucho menos, para su entrega a los agricultores. Es preciso que el investigador prepare un set de recomendaciones (paquetes tecnológicos?) en forma resumida pero clara, de manera que los que deben trabajar en la transferencia de dichos resultados puedan hacerlo sin complicaciones.

Tres años de investigación, creo que permiten dar buenas recomendaciones, que de ninguna manera deben ser consideradas como definitivas, ya que debe tomarse en cuenta que toda recomendación es temporal y ésta sujeta a revisiones periódicas.

Técnicamente creo que la ampliación de investigación Allsides a Olive River es una medida certera, ya que era necesario investigar otras prácticas de conservación de suelos además de las terrazas; de manera que los estudios iniciados en Olive River podrán dar evidencias concretas. Los tratamientos en estudio son:

1. Montículos individuales con plantación de yarns.
Es el tratamiento testigo y corresponde a la práctica del agricultor.
2. Montículos individuales en bancadas (hillside ditches) con plantación de yarn en asocio con otros cultivos.
3. Montículo continuo en bancadas (hillside ditches) con yarn en asociación.
4. Idem que anterior con fajas de contención con zacate Napier.

La instalación para medición de la erosión en cada uno de estos tratamientos es reciente y datos correspondientes al mes de mayo dan los siguientes resultados en términos de toneladas de suelo perdido/hectárea:

Trat. 1 = 82.8 T/ha.

Trat. 2 = 43.5 T/ha.

Trat. 3 = 18.7 T/ha.

Trat. 4 = 15.0 T/ha.

Estos resultados se explican por sí mismos y muestran en forma drástica la diferencia de los que "puede" perder el agricultor con su práctica corriente en comparación a cuando se usan prácticas de manejo adecuadas.

Infelizmente, la práctica de terrazas (que es el tratamiento aplicado a los suelos del Proyecto Allsides) no es parte del experimento en Olive River; y no fue considerado por falta de terreno; hubiera sido interesante incluirlo en el experimento de algún modo.

Finalmente, considero que técnicamente el proyecto de ninguna manera resolverá el problema de producción de alimentos del país, pero sin duda que sienta bases muy sólidas para tal propósito, así como para el refuerzo institucional nacional. También es evidente que el Proyecto ha dado credibilidad a la capacidad de IICA en el país y le da una credencial muy favorable para establecer otros proyectos. Además ha permitido ya la generación de otros proyectos similares aunque bajo el control de otras agencias, i.e. AID, FAO, etc., las cuales infelizmente carecen de la experiencia y capacidad desarrollada de IICA.

Un comentario final sobre el mecanismo de evaluación, considero que la preparación de 3 Documentos pre-evaluación no se justifica, por lo menos en el caso del Proyecto Allsides notamos una repetición de conceptos, preguntas y respuestas, que al final recargan el trabajo de las oficinas; fácilmente un solo documento pre-evaluación sería suficiente.

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Para terminar, el agradecimiento a los Drs. Aitken, Wahab, Johnson y Woo por su cooperación durante la misión de evaluación, así como el personal administrativo de la Oficina IICA.

5. Firma del técnico responsable

Rufo Bazán

6. 24 de junio de 1980



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