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Remote Sensing Principles: Detailed Analysis

The Principles as formulated and reported in last year's LSC report (A/AC.105/218) are attached as tab.

Principle I

International Organizations

Footnote 1 - stipulates that the matter of the application of these principles to international inter-governmental organizations is to be considered later. This appears acceptable. The possible application to such organizations should be borne in mind throughout the debates on the subject.

Scope

The scope of the principles is defined at present to include "remote sensing of the natural resources of the earth and its environment." This phrase has not been controversial in the past but may become so. Footnote 2 points out that this phrase is not completely agreed and is subject to further discussion. The US introduced this terminology some years ago attempting to distinguish the remote sensing of the natural features of the earth and its environment from remote sensing of man-made structures (e.g. missile silos, roads, trucks, etc.) It is essential to limit the scope of these principles in order to avoid their application to our classified reconnaissance activities.

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We are not aware that any country has in mind making these principles cover our classified activities. However, in light of public acknowledgement of the "fact-of" such activities, it is possible that such an attempt would be made. We note that the Soviet Union in its Convention on Transfer and Use of Data of the Remote Sensing of the Earth from Outer Space, signed by a number of Eastern European countries, has defined "remote sensing of the earth from outer space" to include "anthropogenic objects and formations". When queried informally on the intent of that phrase, the Soviet del to last year's Outer Space Committee meeting said they intended to include such things as factories, missile silos, and ships.

The distinction we are attempting to draw will be very difficult to maintain if others are intent on including sensing of man-made objects in the scope of these principles. It is obvious that imagery of sufficiently fine resolution will enable the identification of man-made objects even though its purpose may be the sensing of the natural resources of the earth.

The direct approach, i.e. explicitly excluding from the scope of the principles those activities we consider sensitive, has certain pitfalls. If, for example, we propose to exclude remote sensing pertaining to the verification of

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arms control agreements, we may expect some difficulty from those countries who have supported the French proposal for an international satellite verification agency. Nevertheless, the LSC is a consensus forum and a definition of scope inimical to our interests can be prevented.

There are several principles already agreed upon to a large extent that could be troublesome to us if classified remote sensing is included. These include Principles II, IV, VIII, and XII. In addition, new principles XIII to XVII could also prove troublesome.

An alternative approach could be to adjust the troublesome principles so that their impact on sensitive remote sensing activities is acceptable. This approach was taken in the discussion of Principle X.

### Definitions

The definitions of primary data and analyzed information have been included subject to further discussion. The words "primary" and "analyzed" have been bracketed. These terms are useful because they emphasize the distinction between data and information in the context of the principles. However, if none see confusion arising if the bracketed terms are omitted, we should be able to accept it. Also bracketed in the definition of information is a reference to the previous definition of data. This again tends to clarify the meaning

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of the word. However, if none find its omission confusing we should be able to accept it.

### Principle II

This principle is acceptable if the term "should" is selected.

We read this principle as permitting both private sector and classified activities even though the opportunities for international cooperation may be limited and it may be argued by others that these activities are not in the interests of all countries.

### Principle III

This is acceptable if the bracketed "should" is chosen.

### Principle IV

This is acceptable if "should" is selected.

We read this principle as permitting both private sector and classified remote sensing activities even though opportunities for international cooperation may be limited.

### Principle V

This is acceptable if the "should"s are chosen. There is no implication in our view, that the parties are expected to or obliged to examine all data searching for information useful for preventing phenomena detrimental to the national environment. Nor would the parties fall short of their obligations if such phenomena occurred and had not been

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identified in relevant remote sensing data. In our reading of this principle, parties are expected to identify and make available such information as comes to their attention.

Principle VI

Acceptable if "should" is chosen.

Principle VII

Acceptable if "should" is chosen.

Principle VIII

This principle is acceptable. In our reading it does not obligate the release of classified data. In a case in which data or information pertaining to an impending natural disaster can be. This presupposes that information derived from remote sensing on an impending natural disaster will never be withheld.

Such data and/or information in private hands is likewise subject to this principle. However, in our reading it does not prevent proprietary interests in data or information in general, but does in effect deny proprietary rights in data or information obtained from remote sensing pertaining to an impending natural disaster.

Principle IX

This principle is to be considered in connection with the formulation of a principle on dissemination of data or information.

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The word <sup>shall</sup> "~~should~~" is not acceptable.

Two options remain:

- a) data/information should be used in a manner compatible with legitimate rights and interests of other states; or
- b) data/information should not be used to the detriment of the legitimate rights and interests of other states.

Option (a) is a formulation that avoids excluding explicitly any use of data/information. Option (b) explicitly excludes uses detrimental to other states. The positive formulation, Option (a), should be chosen.

The legitimate rights and interests of other states are not defined. Presumably they would include military and economic areas. We read this principle as permitting our classified remote sensing activities; they are clearly for the purpose of maintaining international peace and stability and are therefore compatible with the rights and interests of other countries. We also read the principle as permitting private sector remote sensing.

#### Principle X

Acceptable if "should" is chosen. This principle implicitly recognizes that countries do have laws and regulations that may prevent the disclosure of certain technical information. Such laws and regulations in our view include: export control; classification; and protection of proprietary rights.

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Principle XI

"Should" is to be selected.

In order to make the remaining language of this principle consistent with the language of the 1967 Outer Space Treaty, the principle ~~should~~<sup>c</sup> read as follows:

"States should bear international responsibility for national activities of remote sensing of the earth, whether such activities are carried on by governmental agencies or by non-governmental entities and for assuring that national activities are carried out in conformity with the provisions of these principles.

This formulation differs from any of the options in Principle XI. The contentious point is the question of "guarantees" that such activities comply with these principles. A guarantee appears to go beyond an assurance. It may imply some sort of pecuniary liability. We should not accept this term. However, if the term "assurance" can be substituted for guarantee we should be able to accept.

Principle XII

"Should" instead of "shall".

This principle is subject to review in the light of the discussion on access to data by third states.

Agreement of Sensing State

Access to data is to be timely and non-discriminatory

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and on reasonable terms. The proviso that these terms "be mutually agreed upon with the sensing state" retains for the sensing state a measure of control over access. This is necessary in order to avoid having the "reasonable" terms dictated by others.

#### Basis for Access

Some have argued for access on a continuous and priority basis. This would impose administrative burdens difficult to handle. In a program such as Landsat where the number of countries sensed is very large, it would be next to impossible to arrange for each country to have continuous and priority access to the data. What does seem manageable is to provide access for the sensed state no later than any third state. Therefore the first expression should be deleted and the second acceptable.

#### Classified and Private Sector Activities

This principle cannot apply to classified activities. We do provide classified remote sensing data to other countries under stringent controls. This is done generally without providing such access to the sensed country. It would be against our national security and foreign policy interests to provide such access to the sensed country as a general practice.

The principle would apply to unclassified private sector activities.

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Principle XIII

This principle deals with the question of "full and permanent sovereignty of all states and peoples over their own wealth and natural resources". The United States has not recognized such a principle -- the term "permanent sovereignty" suggests that resources may be traceable into end products and perhaps recoverable by the sovereign at some stage. There is no question of the sovereign rights of a state over the natural resources within its jurisdiction but that is not the subject of the principle. The US cannot <sup>now</sup> accept this or any principle based on or including the notion of "permanent sovereignty".

"Shall" is not acceptable.

If at some stage the US may be willing to accept a notion of permanent sovereignty, the notion should be qualified to take adequately into account the rights and interests of others. The term "with due regard..." for such rights and interests is not adequate. It would be better to elevate the consideration of the rights and interests of others in accordance with international law to higher priority. Thus language might be acceptable as follows:

"...when that does not conflict with the rights and interests of other states and their natural and juris-

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dical persons in accordance with international law..."

The bracketed term "as well as their inalienable right to dispose of their natural resources" should follow directly the words "over their own wealth and natural resources". If it is made to do so it then is an elaboration on the principle of permanent sovereignty and can be accepted if the basic principle is accepted. If the bracketed term is not moved ahead of the term dealing with the rights and interests of others, its meaning is unclear and cannot be accepted.

The bracketed term "and of information concerning those resources" cannot be accepted. It is intended to go along with the previous bracketed term and to describe an inalienable right of a state over the disposing of information concerning its resources. While we would see no problem in a State's asserting sovereign control over information in its own hands, it is impossible to accept the notion of such control over information in the hands of other states or entities outside that state. This notion also seems counter to the principles regarding the free flow of information without regard to natural frontiers.

#### Principle XIV

This principle deals with notice regarding the conduct of remote sensing activities. Provided this deals only

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with unclassified activities we should be able to accept a principle calling for notice. There are practical considerations that would make it extremely difficult and possibly costly to provide detailed information on a day to day basis concerning territories covered in a program of global remote sensing (e.g. Landsat). Nevertheless, we do provide a great deal of information concerning geographical coverage, mission parameters, sensor characteristics, etc. for certain unclassified activities such as Landsat and we should have no difficulty in accepting a principle along those lines.

It should be understood that advance notice is apt to be changed in details such as coverage and time. Notice of activities being conducted is preferred.

Notice should be given to the Secretary General of the UN. A requirement to notify directly each of the more than 100 states that may be sensed would be burdensome for the US. Moreover, the UN should in this fashion serve as intermediary emphasizing the idea that the sensing country is not obligated to the sensed country.

#### Principle XV

This principle deals with consultation on request of the sensed state. This principle is generally acceptable if "should" is selected.

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It stipulates that a sensing state should consult without delay. It would be better if it said that sensing state should consult when requested. Some delays are unavoidable in most circumstances and it would very difficult therefore to abide by this provision.

The dissemination of data appears to be an activity reasonably included in the possible subjects of consultation. However, dissemination of information is not. The information resulting from analysis of remote sensing data can be in the hands of entities having proprietary rights to the results of their analyses and may even be in the hands of other governments. It would be inappropriate to consult on the question of information dissemination in general.

This principle would be acceptable even if classified activities were deemed included for it does not require divulging any specific information.

#### Principle XVI

This principle cannot be accepted. The sensing state should retain its responsibility and prerogatives concerning data dissemination. These decisions cannot be based on a requirement of approval of the sensed state. It is conceivable that a substitute principle might be offered along the following lines:

"States carrying out remote sensing of the earth should be mindful of the interests and sensitivities of

CONFIDENTIAL

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of other states in the dissemination of data resulting from such remote sensing."

Again, information must be excluded from coverage.

The principle as formulated in the annex would impact adversely upon both classified and private sector remote sensing.

#### Principle XVII

This principle addresses the matter of dispute settlement. It calls for prompt consultations among the disputing parties. If such consultations fail to resolve the dispute this principle calls for seeking solutions through other established procedures.

The word "should" is to be selected.

It is not unreasonable to provide for the settlement of disputes. Consultations among the parties seem an appropriate and acceptable mechanism.

We should not agree to a provision for dispute settlements that deprives the US of the competence to control its own remote sensing activities. In particular, we should not permit matters such as these raised in discussing these principles to be settled against our interests. The provision suggested should be acceptable since it is conditioned on mutual agreement by the parties.

#### Annex V - Principle XII

This was submitted by the Mongolian delegation to the Legal Subcommittee last year. It is an alternate

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formulation to principle XIII discussed above. It is unacceptable for the reasons put forth above.

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A/AC.105/218

English

Annex III

Page 5

## Appendix

### Principle I 1/

For the purposes of these principles with respect to remote sensing of the natural resources of the earth and its environment: 2/

(a) The term "remote sensing of the earth" means "remote sensing of the natural resources of the earth and its environment". 3/

\*(b) The term "primary data" means those primary data which are acquired by satellite-borne remote sensors and transmitted from a satellite either by telemetry in the form of electromagnetic signals or physically in any form such as photographic film or magnetic tape, as well as preprocessed products derived from those data which may be used for later analysis.

\*(c) The term "analysed information" means the end-product resulting from the analytical process performed on the primary data as defined in paragraph (b) above combined with data and/or knowledge obtained from sources other than satellite-borne remote sensors.

### Principle II

Remote sensing of the earth from outer space and international co-operation in that field shall should be carried out for the benefit and in the interests of all countries, irrespective of their degree of economic or scientific development, and taking into consideration, in international co-operation, the particular needs of the developing countries.

### Principle III

Remote sensing of the earth from outer space shall should be conducted in accordance with international law, including the Charter of the United Nations

\* The question of the introduction of these definitions into the texts of the principles is to be considered later.

1/ The question of the application of these principles to international intergovernmental organizations will be considered later.

2/ The formulation "with respect to remote sensing of the natural resources of the earth and its environment" will be reviewed in light of the title to be given to the principles.

3/ This term is still subject to further discussion. In the view of some delegations, it would be necessary in the future work to further define the meaning of the words "remote sensing of the earth and its environment".

A/AC.105/218

English

Annex III

Page 6

and the Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, including the Moon and other Celestial Bodies.

#### Principle IV

1. States carrying out programmes for remote sensing of the earth from outer space /should/ /shall/ promote international co-operation in these programmes. To this end, sensing States /should/ /shall/ make available to other States opportunities for participation in these programmes. Such participation should be based in each case on equitable and mutually acceptable terms due regard being paid to elements ....

2. In order to maximize the availability of benefits from such remote sensing data, States are encouraged to consider agreements for the establishment of shared regional facilities.

#### Principle V

Remote sensing of the earth from outer space /should/ /shall/ promote the protection of the natural environment of the earth. To this end States participating in remote sensing /should/ /shall/ identify and make available information useful for the prevention of phenomena detrimental to the natural environment of the earth.

#### Principle VI

States participating in remote sensing of the earth from outer space /should/ /shall/ make available technical assistance to other interested States on mutually agreed terms.

#### Principle VII

1. The United Nations and the relevant agencies within the United Nations system should promote international co-operation, including technical assistance, and play a role of co-ordination in the area of remote sensing of the earth.

2. States conducting activities in the field of remote sensing of the earth /shall/ /should/ notify the Secretary-General thereof, in compliance with article XI of the Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, including the Moon and other Celestial Bodies.

#### Principle VIII

Data and/or information obtained by remote sensing of the earth indicating an



impending natural disaster shall be disseminated as promptly as possible to those States likely to be affected.

#### Principle IX 1/

Taking into account the principles I and II above, remote sensing data or information derived therefrom /shall/ /should/ /not/ be used by States /to the detriment of/ /in a manner compatible with/ the legitimate rights and interests of other States.

#### Principle X

States participating in remote sensing of the earth either directly or through relevant international organization /shall/ /should/ be prepared to make available to the United Nations and other interested States, particularly the developing countries, upon their request, any relevant technical information involving possible operational systems which they are free to disclose.

#### Principle XI

States /shall/ /should/ bear international responsibility for /national/ activities of remote sensing of the earth /irrespective of whether/ /where/ such activities are carried out by governmental /or non-governmental/ entities, and /shall/ /should/ /guarantee that such activities will/ comply with the provisions of these principles.

#### Principle XII

A sensed State /shall/ /should/ have timely and non-discriminatory access to data obtained by remote sensing of the earth from outer space, pertaining to its territory on reasonable terms /to be mutually agreed upon with the sensing State/ and to the extent feasible and practicable, /shall/ /should/ be provided with such data on such terms /on a continuous and priority basis/ /and in any case no later than any third State/. 2/

#### Principle XIII

/Without prejudice to the principle of the freedom of exploration and use

1/ Should be considered in connexion with the formulation of a principle on dissemination of data or information and subject to later discussion of the terms "information" and "data".

2/ Subject to review in the light of the discussion on access by third States.

/...

of outer space, as set forth in article I of the Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, including the Moon and other Celestial Bodies, remote sensing of the earth /should/ /shall/ be conducted with respect for the principle of full and permanent sovereignty of all States and peoples over their own wealth and natural resources /with due regard to the rights and interests of other States and their natural and juridical persons in accordance with international law/ /as well as their inalienable right to dispose of their natural resources/ /and of information concerning those resources./

#### Principle XIV

//A State which intends to conduct remote sensing of the earth from outer space shall give advance notification to the States whose territory will be sensed./ /A State /intending to conduct/ /conducting/ remote sensing activities of the earth from outer space shall notify the Secretary-General of the United Nations and /upon request/ the States whose territory is intended to be covered by such activities /to the fullest extent feasible and as soon as practicable/ of the intended launch, /nature of the/ mission, duration and coverage of such activities. The Secretary-General shall publish information thus received.//

#### Principle XV

/A State carrying out remote sensing of the earth /shall/ /should/ without delay consult with a State whose territory is sensed upon request of the latter in regard to such activity, /in particular dissemination of data and information,/ in order to promote international co-operation, friendly relations among States and to enhance the mutual benefits to be derived from this activity./

#### Principle XVI

/States carrying out remote sensing of the earth shall not, without the approval of the States whose territories are affected by these activities, disseminate or dispose of any data or information on the natural resources of these States to third States, international organizations, public or private entities./

#### Principle XVII

/Any dispute that may arise with respect to the application of these principles /shall/ /should/ be resolved by prompt consultations among the parties to the dispute. Where a mutually acceptable solution cannot be found by such consultations it /shall/ /should/ be sought through other established procedures for the peaceful means of settlement of disputes mutually agreed upon by the parties concerned./

/...

Annex V

LEGAL IMPLICATIONS OF REMOTE SENSING OF THE EARTH FROM SPACE,  
WITH THE AIM OF FORMULATING DRAFT PRINCIPLES

Working paper submitted by Mongolia

(document A/AC.105/C.2/L.113 of 28 March 1978)

Principle XII

Without prejudice to the principle of the freedom of exploration and use of outer space, as set forth in article I of the Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, including the Moon and Other Celestial Bodies, remote sensing of the Earth should be conducted on the basis of the principle of the full and permanent sovereignty of all States and peoples over their own wealth and natural resources, and of due respect for their inalienable right to dispose of their natural resources.

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