

The Use of the Provisional Central Product Classification

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INTRODUCTION

1. The purpose of this paper is to review the use and appropriateness of the provisional Central Product Classification (CPC). The review focuses on the versions of the product classifications used for collecting statistics on the output of services and takes account of the users' comments and recommendations. Some sections of the CPC were tested with the aim of finding out whether they were adequate for data collection. The sections involved were computer and related services; engineering services; accounting, auditing and book-keeping services; taxation services; management consulting services; audio-visual services; advertising services and legal services.

I. COMPUTER AND RELATED SERVICES

2. A revised version of the CPC 84-Computer and related services has been tested by Canada, Finland, France and New Zealand in the collection of output statistics. Table 1 shows the current CPC and the version used for testing.

3. The current CPC was regrouped as follows:

(1) The elaboration of CPC 84210 - Systems and software consulting services into the categories: systems and technical consulting services; packaged software products; and custom software development services.

(2) The following categories have been merged into one product class titled, "Systems analysis and programming services":

CPC 84220 - System analysis services
CPC 84230 - Systems design services
CPC 84240 - Programming services

(3) The following categories have been merged into one product class titled "data processing and tabulation services":

CPC 84320 - Data processing and tabulation services
CPC 84330 - Time sharing services

Table 1

THE RELATIONSHIP BETWEEN CPC 84 AND THE TESTED CLASSIFICATION

CPC 84		TESTED CLASSIFICATION
841	<u>Computer and related services</u>	841 <u>Packaged software products (of own design)</u>
8410 84100	Consultancy services related to the installation of computer hardware	8411 System and user tools software
		8412 Application software
842	<u>Software implementation services</u>	842 <u>Professional computer services</u>
8421 84210	Systems and software consulting services	8421 Consultancy services related to the installation of hardware
8422 84220	Systems analysis services	8423 Custom software development services
8423 84230	Systems design services	8424 Systems analysis and programming services
		8425 Computer facilities management services
843	<u>Data processing services</u>	843 <u>Computer processing services</u>
8431 84310	Input preparation services	8431 Data processing and tabulation services
8432 84320	Data processing and tabulation services	8432 Data entry services
8433 84330	Time sharing services	
8439 84390	Other data processing services	8439 Other computer processing services
844	<u>Data base services</u>	844 <u>Data base services (electronic information services)</u>
8440 84400	Data base services	
845		845 <u>Computer repair and maintenance services</u>
8450 84500	Maintenance and repair services of office machinery and equipment including computer	
849	<u>Other computer services</u>	849 <u>Other computer services</u>
8491 84910	Data preparation services	
8499 84990	Other computer services n.e.c.	

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- (4) The elimination of CPC 84310 - Input preparation services and CPC 84910 - Data preparation services; and
- (5) The creation of a category titled "Data entry services"

4. In the version used for testing, the 3-digit categories are:

- CPC 841 - Packaged software products
- CPC 842 - Professional computer services
- CPC 843 - Computer processing services
- CPC 844 - Data base services
- CPC 845 - Computer repair and maintenance services
- CPC 849 - Other computer services

5. The following are comments on the use of the classification of computer and related services in pilot surveys.

6. CPC841-Packaged software products

France	The product group 8411- Systems and user tools software was not tested. It is considered a service provided by computer manufacturers.
New Zealand	The sales of a significant group of respondents take the form of providing a "group" of services. These respondents combined packaged software with computer hardware sales.

7. CPC 842-Professional computer services

Canada	Experienced very little difficulty in obtaining accurate responses for CPC 842. Most systems integrators are able to report revenues from the sale of computer hardware separately from the sale of professional computer services. However it is more difficult to obtain accurate details for the subcategories. In many cases, items are not recorded in companies' accounts.
Finland	The distinction between custom software development and programming services did not create any problems. There probably was some confusion between CPC 8425 -

Facilities management and CPC 8431 - Data processing and tabulation services.

France CPC 8424 - Systems analysis and programming does not seem to be relevant.

New Zealand Systems integrators combined CPC 8422 - Systems and technical consulting services and CPC 8423 - Custom software development services. CPC 8423 was also combined with CPC 8424 - Systems analysis and programming services.

8. CPC 843 - Computer processing services

Canada CPC 843, and in particular 8431 - Data processing and tabulation - is one of the most difficult categories to interpret and apply, due to the ambiguity of the term "processing" and to the generalised use of computer equipment to offer a wide range of services.

Finland CPC 8431 - Data processing and tabulation services - seem to be a 'general purpose class'.

New Zealand The responses from large and medium businesses combined CPC 8431 - Data processing and tabulation services with CPC 8432 - Data entry services

9. CPC 844 - Data base services

Canada The main difficulty encountered in the collection of data for CPC 844 has been to convey the intended meaning of the category. The expression, 'on-line information retrieval' is better understood in the industry.

10. CPC 845 - Computer repair and maintenance services

Canada CPC 845 tend to be provided mainly by wholesalers of computer equipment. There are few companies whose main source of revenue derives from this service.

France CPC 845 is mainly provided by computer manufacturers.

11. CPC 849 - Other computer services

Canada Information about CPC 849 is particularly important when firms expand abroad; in those cases development charges and management fees typically become an increasing component of revenues.

II. ENGINEERING SERVICES

12. Canada and Finland assessed the relevance of the CPC for engineering services on the basis of experiences with different versions of the CPC in the collection of revenue data by type of engineering service.

13. In Canada, the surveys have been carried out since 1986 and the most recent observations are for 1989. The survey of revenues asks for separate estimates of fees earned by type of service rendered and by field of specialisation. CPC 86721 - CPC 86739 relate to the type-of-service classification used in the Canadian survey.

14. Table 2a shows the CPC and survey categories for engineering services.

15. Canada's findings are as follows:

- a. The CPC appropriately classifies engineering services and should therefore stand;
- b. The detailed integrated engineering service categories are not very useful in the Canadian setting;
- c. The notion of 'turnkey' projects seem to apply to industrial projects;
- d. The absence of an explicit category for 'project management services';
- e. The need to restructure CPC 867 - Architectural, engineering and other technical services; in order to (i) introduce more homogeneity at the three digit level and (ii) allow for the development of the classification at its most detailed level.

16. In 1990, Statistics Finland carried out an enterprise survey among several business industries, including businesses engaged in engineering services. The survey reviewed firms' customer groups and the distribution of turnover or invoicing among their various services.

17. The survey classification of engineering services was based on the product groups at the 5-digit level of the CPC. Table 2b

Table 2a (Canada)

THE RELATIONSHIP BETWEEN CPC 867 CATEGORIES AND THE TESTED CLASSIFICATIONS

SURVEY	CPC	
Turnkey projects	8673	Integrated engineering services
Advisory services - environmental	86721	Advisory and consultative engineering services
Advisory services - other		
Design services - environmental	86722	Engineering design services for the construction of foundations and building structures
Design services - other		
	86723	
	86724	Engineering design services for the construction of civil engineering works
	86725	Engineering design services for industrial process and production
	86726	Engineering design services n.e.c.
Project management services	Integral part of CPC 8671, 8672 and 8673	
Supplementary services	86729	Other engineering services

CPC CATEGORIES		SURVEY CATEGORIES
86721	Advisory and consultative engineering services	Advisory services - environmental Advisory services - other
86722	Engineering design services for construction of foundations and building structures	
86723	Engineering design services for mechanical and electrical installation for buildings	
86724	Engineering design services for the construction of civil engineering works	
86725	Engineering design services for industrial process and production	
86726	Engineering design services n.e.c.	
86729	Other engineering services	Supplementary services
8673	Integrated engineering services	Turnkey projects
Not explicitly delineated		Project management

Table 2b (Finland)

THE RELATIONSHIP BETWEEN CPC 867 CATEGORIES AND THE TESTED CLASSIFICATION

CPC		TESTED CLASSIFICATION	
8672	<u>Engineering services</u>		
86721	Advisory and consultative engineering services	86721	Engineering services related to building construction
86722	Engineering design services for the construction of foundations and building structures	86722	Engineering services related to civil engineering
86723	Engineering design services for mechanical and electrical installation for buildings	86723	Engineering services related to machinery and process
86724	Engineering design services for the construction of civil engineering works		
86725	Engineering design services for industrial processes and production		
86726	Engineering design services n.e.c.		
86727	Other engineering services during the construction and installation phase		
86729	Other engineering services		
8673	<u>Integrated engineering services</u>	8673	<u>Not tested as a separate class</u> Are included in class 8672
86731	Integrated engineering services for transportation infrastructure turnkey projects		
86732	Integrated engineering and project management services for water supply and sanitation works turnkey projects		
86733	Integrated engineering services for the construction of manufacturing turnkey projects		

shows the current CPC and the tested classes. The latter consists of three product groups classified according to the industry purchasing engineering services, namely, (1) building construction, (2) civil engineering, and (3) manufacturing and other branches. These customer groups were defined in terms of the CPC sub-classes.

A. Engineering services related to building construction

18. This group comprises structural and geo-structural technology, heating, water supply, air conditioning, electric and telecommunications technology connected with building construction, acoustics and real estate technology and evaluation. The range of CPC products covered include:

- a. CPC 86723 - Design services for mechanical and electrical installations for buildings and
CPC 86722 - design services for the construction for foundations and building structures;and
- b. The following subclasses that are related to building construction:
 - CPC 86721 Advisory and consultative engineering services
 - CPC 86726 Engineering design services n.e.c (acoustical and vibration engineering designs)
 - CPC 86727 Other engineering services during the construction and installation phase.

B. Engineering services related to civil engineering

19. The services included are traffic technology, road, street and district technology, bridge construction, water supply and water way construction technology and rock construction and geoconstruction technology related to community building. The range of CPC products covered include:

- a. CPC 86724 - design services for the construction of civil engineering works are included in these services in their entirety; and
- b. The following subclasses which are related to civil engineering:

- CPC 86721 Advisory and consultative engineering services
- CPC 86726 Engineering design services
- CPC 86727 Other engineering services during the construction and installation phase.

C. Engineering services related to machinery and process design

20. This group comprises automation technology and instrumentation, energy, machine construction, transportation, materials handling, shipbuilding and process technology, heating, water supply, air conditioning, electric and telecommunications technology related to machine and process design, and environmental management technology. The range of CPC products covered include:

- a. CPC 86725 - design services for industrial processes and production are included in these services in their entirety; and
- b. The following subclasses that are related to civil engineering:
 - CPC 86721 Advisory and consultative engineering services
 - CPC 86726 Engineering design services n.e.c. (prototype development and detailed designs for new products)
 - CPC 86727 Other engineering services during the construction and installation phase.

D. CPC 8673 Integrated engineering services

21. This class was not a separate item in the survey. Integrated engineering services were included in the respective subclasses of CPC 8672. The CPC subclasses are connected with civil engineering (86731 and 86732) and manufacturing (86733).

22. The findings from the survey of engineering services are as follows:

- (1) The 5-digit sub-classes should be defined more precisely;
- (2) The 5-digit-level product groups were deemed to be too detailed for survey-taking;

- (3) The following three sub-classes of the 'other services' type in succession may produce confusion.

CPC 86726- Engineering design services n.e.c.

CPC 86727- Other engineering services during the construction and installation phase

CPC 86729 Other engineering services

- (4) Subclasses 86726 and 86727 could be combined to CPC 86729- Other engineering services. Geotechnical engineering services providing engineers and architects with subsurface information to design various projects (included in CPC 86729) are very close to geological and geophysical prospecting services (CPC 86751) and subsurface surveying services (CPC 86752). There is a risk that these services will get mixed up with each other.

III. ACCOUNTING, TAXATION, MANAGEMENT CONSULTING SERVICES

23. Canada and Finland tested CPC 862- Accounting, auditing and bookkeeping services; CPC 863- Taxation services and CPC 865- Management consulting services.

24. In Canada, a pilot survey collected data on revenue by type of service for all CPC 5-digit categories in regard to accounting services and taxation services and a selection of those related to management consulting services.

25. In Finland, the test of CPC categories involved mostly the CPC 5-digit sub-classes for management consulting services and combined sub-classes for accounting, auditing and book-keeping services. Taxation services were not tested as a separate group.

26. Tables 3a and 3b show the current CPC for accounting, auditing and book-keeping services; taxation services and management consulting services and the versions used for testing by Canada and Finland respectively.

27. Canada's findings and recommendations are as follows:

1. The CPC adequately describes the type and range of services provided by the firms surveyed;
2. The classification of output is consistent with the 4-digit level of the CPC 8621- accounting and auditing services; 8622- Book-keeping services and 8630-Taxation services;
3. It was recommended that CPC 86212 - Accounting review services should be split into two categories: (1) accounting review services with compilation and (2) accounting review services without compilation;
4. It was also recommended that the 5-digit subclasses of CPC 8630 - taxation services - should be revised as follows:

CPC 8630 - Taxation services

- 86301 - Tax planning and consulting services
 - The provision of advice to businesses and individuals on the means of minimizing the impact of income taxes on their revenues by taking advantage of all allowances and benefits that the law provides.

Table 3a (Canada)

THE RELATIONSHIP BETWEEN THE CPC (862, 863, 865) AND THE TESTED CLASSIFICATION

PILOT SURVEY CATEGORIES	CURRENT CPC CATEGORIES	
Auditing	86211	Financial auditing services
Review engagement with compilation	86212	Accounting review services
Review engagement without compilation		
Compilation	86213	Compilation of financial statements services
Bookkeeping	86220	Bookkeeping services, except tax returns
Income tax planning and advice	86301	Business tax planning and consulting services
	Part of 86303	Individual tax preparation and planning services
Personal income tax return preparation	Part of 86303	Individual tax preparation and planning services
Business income tax return preparation	86302	Business tax preparation and review services
Commodity taxes	86309	Other tax related services
Other taxation services		
Insolvency services	Not explicit in CPC -- probably a component of 87909: Other business services n.e.c.	
General management advisory services	86501	General management consulting services
Financial management advisory services	86502	Financial management consulting services (except business tax)
Information management & EDP consulting	Part of 842	Software implementation service
	Part of 841	Consultance services related to the installation of hardware
Human resource consulting services	86503	Marketing management consulting services
	86505	Production management consulting services
	86509	Other management consulting services
Other revenues	86219	Other accounting services and other revenues

Table 3b (Finland)

THE RELATIONSHIP BETWEEN THE CPC (862, 863, 865) AND THE TESTED CLASSIFICATION

CURRENT CPC		TESTED CLASSIFICATION	
862	Accounting, auditing and bookkeeping services	862	Accounting, auditing and bookkeeping services
8621	Accounting and auditing services	8621	Accounting and auditing
86211	<u>Financial auditing services</u>	86211	<u>Auditing (CPC 86211, 86212)</u>
86212	Accounting review services		
86213	Compilation of financial statements	86219	Other accounting services (CPC 86213, 86219)
86219	Other accounting services		
8622	<u>Bookkeeping (except tax returns</u>	8622	<u>Bookkeeping</u>
8630	<u>Taxation services</u>	863	Not tested as a separate group Are included in classes 8622 and 86219
86301	Business tax planning and consulting		
86302	Business tax preparation and review services		
86303	Individual tax preparation and planning services		
86309	Other tax related services		
8650	<u>Management consulting services</u>	865	Management consulting services
86501	General management consulting services	86501	General management consulting and CPC 87201 executive search services
86502	Financial management consulting (except business tax)	86502	As CPC 86502
86503	Marketing management consulting	86503	As CPC 86503
86504	Human resources management consulting	86504	As CPC 86504
86505	Production management consulting	86505	As CPC 86505
86506	Public relations services	86506	As CPC 86506
86509	Other management consulting services	86509	Other services, including 86601 Project management services other than for construction

86302 - Business tax preparation and review services (no change)

86303 - Individual tax preparation and review services
 - Services consisting of preparing or reviewing, for individuals, various returns and reports required for compliance with the income tax laws and regulations, and defending them if contested by the tax authorities.

5. The measurement of the secondary outputs of the accounting services industry led to the introduction of an 'insolvency and receivership service category'. It was recommended that this category be added to

CPC 87908 - other business services and defined as follows:

Insolvency and receivership services - the provision of advice and assistance to the management and/or creditors of businesses having financial difficulties and/or acting as a receiver or trustee in bankruptcy.

28. The following are Finland's observations and recommendations in respect of CPC 862, 863 and 865:

1. The 4-digit classes are in general quite well defined, divided and usable; however, there is a need for clearer explanatory notes;
2. The contents of subclasses 86213 - Compilation of financial statements and 86219 - Other accounting services are not clear; there are no clear examples of the services contained in the sub-classes;
3. CPC 86211- Financial auditing services and 86212- Accounting review services were treated as a single entity because accounting review services were statistically less significant and firms found it difficult to divide their turnover into these sub-classes;
4. The explanatory notes for CPC 86213 should include those work stages related to the closing of accounts;
5. Does CPC 8622 - Bookkeeping services, except tax returns-include payroll computation and ledgers?
6. CPC sub-classes 86301 - Business tax planning and consulting services and 86302 - Business tax preparation and review services - are well defined:
7. CPC 86303-Individual tax preparation should be more broadly defined to include income taxes as well as all

tax preparation and planning services that influence an individual's taxes;

8. Firms did not generally provide separate data for CPC-86502 Financial management consulting services; 86505 Production management consulting services and 86506-Public relation services. They were included in CPC 86501- General management consulting services. In addition, CPC 86502, 86505 and 86506 were partially covered by companies mainly engaged in providing management consulting services;
9. The subclass General management consulting (CPC 86501) could be divided into two subclasses at the 5-digit level: (1) corporate strategy and organisation development, and (2) management systems development and analysis. The definitions are:

Corporate strategy and organisation development services aim at the development of the functioning of the entire organisation, including policy formulation, development of organisational structure, business turnaround plans, development of profit improvement programmes, corporate analysis, strategic planning and execution. etc.

Management systems development and analysis services are related to management operation conditions, such as development and improvement of management information systems, development of management reporting and supervision, management audits, development of boardroom work, etc.

IV. AUDIO-VISUAL SERVICES

29. The Commission on Service Accounts in France tested a revised version of sections of CPC 961-Motion picture, radio and television and other entertainment services on the basis of data collected in the annual survey of service enterprises.

30. In the current CPC the range of audio-visual services includes motion picture and video tape production and distribution services (CPC 9611), motion picture projection services(9612), and radio and television services(9613).

31. Audio-visual services are further classified into 5-digit-product groups that are categorized as follows:

CPC 9611- Motion picture and video tape production and distribution

96111- Services in connection with promotion or advertising

96112- Services in conneciton with motion picture or video tape production

96113- Services in conneciton with motion picture or video tape distribution

CPC 9612- Motion picture projection services

96121- Motion picture projection services

96122- Video tape projection services

CPC 9613- Radio and television services

96131- Radio services

96132- Television services

96133- Combined programme making and broadcasting

32. The Commission considered whether CPC 9611, 9612 and 9613 needed to be supplemented with details according to sources of revenues in order to facilitate the measurement of the output of the audio-visual sector. Subsequently, the National Institute of Statistics in France proposed a more detailed nomenclature in connection with a survey classification for audio-visual services. The survey classification includes the 4 and 5-digit categories of the current CPC 961, but sub-divides the 5-digit sub-classes according to sources of revenues and users of audio-

visual works. In addition, the survey classification revises the explanatory notes in respect of CPC 9611, 9612 and 9613.

33. CPC 9611 - Motion picture and video tape production and distribution services.

This heading concerns production and distribution of television and video tape works, as well as motion pictures. Production can be made on own account (motion pictures, television and videotape works "in inventories", which can be exploited during a long period of time) or on a third party account (institutional moveis or television works "in flow").

34. CPC 96111 - Services in connexion with promotion or advertising.

Production of institutional movies, made to order for enterprises or administration, for internal (professional training, organisation) or external (demonstration, public relations, ..., advertising) information. The producer, called "executive producer", has no financial or artistic responsibility. He has not the duty of gathering financial means, and his remuneration is established on the basis of an estimate; there is no commercial risk. The producer achieves the programme according to a scenario provided along with the estimate.

35. CPC 96112 - Services in connexion with motion picture or video tape production

The heading covers the production of works intended for exploitation in the audiovisual sector: movie theater, video tape, television.

36. CPC 96113 - Services in connexion with motion picture or video tape distribution

Distribution consists in the commercialisation of motion pictures and of television and video tape works "in inventories realised on own account by producers, to users: movie theater owners, television broadcasters and video editors. As regards their remuneration, distributors receive a commission from the users, on the basis of sharing future receipts (distributor's share); in turn, the distributor re-pays a part of the receipt to the producer (producer's share).

The headings make separations among works (movie picture, television and video works) and among users.

37. CPC 9612 - Motion picture projection servicesCPC 96121 - Motion picture projection services

Movie theatres revenues are of three types: box office revenues (sale of entrance tickets), advertising revenues and other theatre revenues (cloakrooms, sales of sweets, ice-creams, ..., bar sales), which are not audiovisual revenues.

CPC 96122 - Video tape projectors services38. CPC 9613 - Radio and television services

There are several types of broadcasts, and to each one is associated one or several types of revenues: public television and radio companies have revenues from specific television and radio duties and, eventually, from advertising; advertising television and radio channels have incomes from various forms of advertising; commercial television channels have revenues from subscription sales, or payments (pay TV) and eventually from advertising; revenues of local cable operating companies (or cable operators) come from subscriptions. Subsidies received by radio and television companies, whatever their source might be, are not included with the revenues studied here, but with other operations subsidies.

The radio or television duty, collected by a public or para-public entity from households and intended for participation in the financement of public operators is not taken into account here as such. One takes into account only the part of the public duty provided to public television and radio channels and considered by the latters as revenues.

CPC 96131 - Radio servicesCPC 96132 - Television services39. CPC 96133 - Combined programme making and broadcasting services

When a broadcaster (radio or television) produces an emission on own account (works in flow, for example, on televised news), he may sell to other broadcasters the rights to re-broadcast.

V. ADVERTISING SERVICES AND LEGAL SERVICES

40. Statistics Finland has tested the CPC 871-Advertising services and CPC 861-Legal services as shown in Table 4.

41. The CPC 4-digit classes were used for collecting revenue data from advertising agencies. Although firms were able to divide their revenues according to the 4-digit classes, it was found that the explanations of all product classes should be specified more precisely than in the current explanatory notes for the CPC. In addition, Finland proposed the following:

1. That CPC 8711-Sale or leasing services of advertising space or time be divided into three 5-digit subclasses
 - Sale or leasing of advertising time (tv, radio, cinema),
 - Sale or leasing of advertising space (newspapers, magazines and other publications) and
 - Sale or leasing of other advertising media (outdoor advertising, direct mail and other).
2. An additional 4-digit class titled "purchased production":

Purchased production includes the intermediation of products other than time and space used in n advertising; that is, products manufactured elsewhere and acquired for reselling (e.g., film production, printing, research). For these commodities, an advertising agency bills its customers and transmits the payment to the producer. For compensation, the customers pay a commission to the agency.

42. As regards CPC 861-legal services, revenue data were collected according to the current CPC and explanatory notes; these were considered to be well described as well as comprehensive

Table 4

THE RELATIONSHIP BETWEEN THE CPC (861, 871) AND THE TESTED CLASSIFICATION

CURRENT CPC		TESTED CLASSES	
861	Legal services	861	Legal services
8611	<u>Legal advisory and representation services in the different fields of law</u>	8611	<u>Legal advisory and representation services in the different fields of law</u>
86111	Legal advisory and representation services concerning criminal law		
86119	Legal advisory and representation services in judicial procedures concerning other fields of law		
8612	<u>Legal advisory and representation services in statutory procedures of quasi-judicial tribunals</u>	8619	<u>Other legal advisory and information services (CPC 8612, 8613, 8619)</u>
8613	<u>Legal documentation and certification services</u>		
8619	<u>Other legal advisory and information services</u>		
871	Advertising services	871	Marketing services
8711	<u>Sale or leasing of advertising space or time</u>	8711	<u>As CPC 8711</u>
8712	<u>Planning, creating and placement services of advertising</u>	8712	<u>As CPC 8712</u>
8719	<u>Other advertising services</u>	8713	<u>Purchased production</u> (not classified as a separate product in CPC)
		8719	<u>Other marketing services</u>

CONCLUSION

43. The paper described recent contributions to the refinement of the services part of the provisional CPC. The process of refining the CPC has focused on the feasibility of collecting data on the output of services. In general, the emerging experiences in the application of the CPC showed that the relevant sections have served mostly as a frame of reference in the design of survey classifications. In surveys of the composition of output of service industries, the product classifications were derived from collapsing or merging some CPC categories as well as creating new ones. The comments on the adequacy of the CPC often indicated the need for further work on the explanatory notes and sometimes suggested amendments to the CPC.

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