DESKTOP ESTIMATES OF THE ECOLOGICAL IMPORTANCE AND SENSITIVITY CATEGORIES (EISC), DEFAULT ECOLOGICAL MANAGEMENT CLASSES (DEMC), PRESENT ECOLOGICAL STATUS CATEGORIES (PESC), PRESENT ATTAINABLE ECOLOGICAL MANAGEMENT CLASSES (PRESENT AEMC) AND BEST ATTAINABLE ECOLOGICAL MANAGEMENT CLASS (BEST AEMC) FOR QUATERNARY CATCHMENTS IN SOUTH AFRICA

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PROCEDURE FOR DESKTOP ESTIMATE OF THE WATER QUANTITY COMPONENT OF THE ECOLOGICAL RESERVE, FOR USE IN THE NATIONAL WATER BALANCE

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Procedure for Desktop Estimate of the Water Quantity Component of the Ecological Reserve

Purpose of the Desktop Estimate

This section describes the procedures for undertaking desktop estimates of RDM for river ecosystems. The desktop estimate procedure was developed in order to serve the National Water Balance. The procedure thus provides an estimate of only the water quantity component of the ecological Reserve, since the National Water Balance Model will address primarily the reconciliation of supply and demand for water quantity at a quaternary catchment scale in South Africa.

Desktop estimates are not intended for use in evaluation and issuing of water use licenses. They are to be used for planning purposes only.

Overview of the Desktop Estimate Procedure

The approach used in the desktop estimate follows that of the generic RDM procedures (Figure A1 in this manual), but several of the generic steps are either greatly shortened, or are omitted altogether.

Delineation of resource units and ecoregional typing

For the desktop estimate, resource units are delineated on quaternary catchment boundaries. No further resolution is undertaken, and no ecoregional typing is undertaken.

Ecological Importance and sensitivity; Present status assessment

The desktop assessment of ecological importance and sensitivity, and present ecological status for all quaternary catchments has been carried out during 1999 as part of the Provincial Water Resources Assessments for the National Water Balance.

Selected local experts, primarily from conservation agencies and government departments of environment in each province, met in several provincial workshops, to determine the ecological importance and sensitivity ratings of each quaternary catchment, and to briefly assess present ecological status, on the basis of their local knowledge and experience. No field surveys were undertaken. The workshops followed the procedures described in this Section C to derive the ecological importance and sensitivity ratings and the present ecological status of each quaternary catchment in the country.

Setting of the ecological management class

A procedure has been developed, which is described in detail in this **Section C**, to derive the desktop ecological mnagement class for each quaternary catchment. The ecological management class assigned to each quaternary determines the water quantity component of the Reserve for that quanternary.

The desktop classification procedure is based on a highly precautionary approach, since no field surveys are included in the procedure. Hence the desktop ecological management class is derived primarily on the basis of ecological importance and sensitivity, modified by the present ecological status assessment. The rationale for this is that river ecosystems which are ecologically highly important and sensitive should be reflected in the National Water Balance as worthy of receiving high levels of protection, and hence they are assigned a high ecological management class, even if they are currently degraded or irreversibly modified from natural.

The information on ecological importance and sensitivity and on the desktop ecological management classes for all quaternary catchments will be published in GIS format by the Department in late 1999 or early 2000.

Estimation of the water quantity component of the ecological Reserve

Once the ecological management class has been derived at desktop level for a quaternary catchment, that class is used in conjunction with the hydrological model developed by Hughes and Münster (1999) to estimate the water quantity component of the ecological Reserve for that quaternary catchment. Use of the hydrological model (loosely termed "the Hughes curves") is described in detail in **Appendix R13** ("A decision support system for an initial low-confidence estimate of the quantity component of the Reserve for rivers.")

Acronyms used in this document:

EISC = ecological importance and sensitivity category
DEMC = default ecological management class
DESC = default ecological status class
PESC = present ecological status category
FMC = flow modification class
AEMC = attainable ecological management class
NWBM = national water balance model
WBDE = water balance desktop estimate

Introduction

In terms of the South African Water Law, the reserve for all significant water resources must be determined. This consists of the reserve for basic human needs as well as the requirements of aquatic ecosystems. The latter is referred to as the ecological component of the Reserve and is the subject of this document.

The Directorate: Water Resources Planning requires a rough, desktop estimate (i.e. based on available information) of the ecological flow requirements of rivers for the purposes of the National Water Balance Model (NWBM). These requirements have been specified to be at the level of quaternary catchments as indicated in WR90 (Midgley et al. 1990). However, quaternary catchment delineations are not based on ecological principles. To provide some ecological basis for the desktop estimate (DE; previously referred to as the "planning estimate"), it was decided to base flow requirements on an index of the ecological importance and sensitivity (EISC; ecological importance and sensitivity category) of rivers in quaternary catchments. This index is then used as an indicator of the default ecological management class (DEMC) that can then be compared to the present ecological status category (PESC; i.e. current condition or ecological integrity status). The DEMC relates to a default ecological status class (DESC)[1], which in theory, should be assigned to a resource, given an indicated level of ecological importance and sensitivity. The default EMC, in a comprehensive classification procedure, might be adjusted depending on additional information and stakeholder consultation, to a desired EMC.

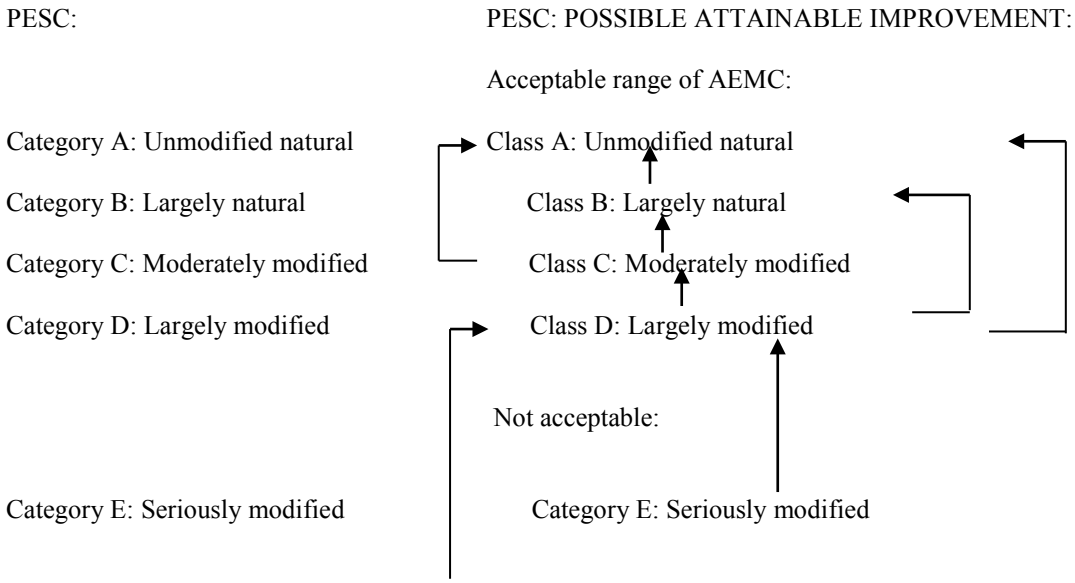
The deviation of the PESC from the DESC can be assessed in terms of the practicality of restoring a system following an assessment of the changes that have occurred, to arrive at an attainable EMC (AEMC). In the context of this report, restoration is defined as "…reestablishment of the structure and function of an ecosystem, including its natural diversity" (Cairns 1988 in: Williams et al. 1997). Generally, structure is seen as the system's native or natural species diversity while function refers to its productivity (i.e. in terms of growth of plant biomass as the basis for food webs) and functions of hydrology, trophic structure and transport. Restoration is viewed as reversing the decline of ecosystem health and returning a degraded ecosystem towards its historic structure

(Williams et al. 1997). In contrast, reclamation and rehabilitation are usually more local and site-specific. Habitat creation refers to establishment of new habitat without regard to historic conditions.

The total procedure followed to determine the AEMC is indicated in Figure C1.

It has been pointed out that integrity refers specifically to more natural ecological conditions, while health is viewed as referring to conditions default by humans but not necessarily natural (Karr 1996). It must be emphasised that cases where a river has been changed completely may represent situations where an alternative approach to the one described here will have to be followed. In such instances the health rather than the integrity of the system will need to be considered. Therefore, situations where a river ecosystem has been changed completely (i.e., through inundation or canalization) will have to be viewed from the ecosystem health perspective (and also habitat creation and rehabilitation) rather than the ecological integrity perspective. This will involve an assessment of a diversity of factors (not only flow and water quantity) and also stakeholder participation to set desirable standards for ecosystem health. This will not be dealt with in the approach presented here.

EISC:	DEMC:	DESC:
Very high	→ No human induced hazards	→Class A: Unmodified natural
High	→ Small risk allowed	→Class B: Largely natural
Moderate	→ Moderate risk allowed	→Class C: Moderately modified
Low/marginal	→ Large risk allowed	→Class D: Largely modified



Category F: Critically modified ___ Category F: Critically modified

Figure C1: Procedure followed in the determination of the AEMC. →: indicates relationship,

⟶ : indicates possible direction of desirable change.

In addition to the needs of the desktop estimate for estimating the ecological flow component of the Reserve for the NWBM, a procedure is also required to derive the ecological management class of aquatic systems for the purpose of licensing as is required in terms of section 16 of the National Water Act (1998) (also see MacKay 1999). The purpose of such a procedure would be to expedite the process of issuing licenses. Such situations are expected to arise when *ad hoc* applications for limited water use in unstressed systems are made or where there is a need to substantiate the refusal of license applications in stressed systems (van Vliet pers.com. 1999). Essentially the same procedure as for the NWBM desktop estimate (referred to as the water balance desktop estimate, WBDE) can be envisaged for these situations. However, it can be expected and considered mandatory that the information required for the determination of the ecological component of the Reserve under these situations, should improve in confidence and detail compared to that of the WBDE, e.g. in all probability, information beyond desktop level will be required. This will be referred to as the rapid determination (MacKay pers. com 1999) and will be dealt in section D of this manual.

This document is a follow-up of the report by Kleynhans et al. (1998) that proposed a procedure to derive the ecological importance and sensitivity of the main stem rivers in quaternary catchments and then to equate this to the DEMC's. This procedure was followed during provincial workshops in 1998/99. However, it became apparent that the DEMC's alone are not sufficient for the purposes of the NWBM and that the present ecological status of the mainstem river in a quaternary catchment will also have to be considered to arrive at a more realistic estimate of the ecological management class, i.e. the AEMC. During the next round of provincial workshops, the ecological importance and sensitivity ratings will be revisited and reviewed based on the experience gained during the first series of workshops to arrive at an improved estimate of the DEMC. In addition, the PESC, restoration potential and AEMC will also be determined during the workshops.

Based on the principle that the estimated flow requirement for a quaternary catchment should be dependent on the EMC, the EMC would be associated with a particular proportion of the average flow or mean annual runoff. A modification of the Montana method was initially proposed for this purpose (Tennant 1976; Kleynhans et al. 1998). It has subsequently been decided by specialists at a workshop, to use a simulation method developed at the IWR of Rhodes University (Hughes & Münster 1999) and contributed to by various specialists at various institutions (i.e., Freshwater Research Unit, IWQS). However, water quality will only be accounted for to a limited context in this approach (i.e. flow related aspects such as water temperature and oxygen concentrations). This is considered sufficient for the purposes of the NWBM.

The following must be emphasised:

- For the purposes of the NWBM, the scale of the desktop estimate will be quaternary catchment level. The PESC will be estimated as indicated in this document. The intention of this procedure is that it should only be used for general planning purposes. Where the information requirements go beyond the general planning level (i.e. beyond desktop level), more detailed procedures should be followed.

- The methodology described here is very conservative and based on a precautionary approach.

Methodology

This methodology is based on the assumption that the ecological importance and sensitivity of a river would generally be closely associated with its default ecological management class, while its current ecological status and the restoration potential will determine the attainability of any future ecological management class.

For the purposes of the WBDE, the procedure proposed here will be followed within the following limitations and considerations:

Although the method is based on the assessment of the mainstem river in quaternary catchments, exceptions to this approach will be followed in the case of the Limpopo River. According to the WR90 maps, the Limpopo (and part of the Marico River) as an international border, does not form the mainstem river in quaternaries of the system. Consequently it was decided in collaboration with Mr. C. Sellick, not only to assess the quaternary catchments in this case but also to determine the DESC and PESC of the Limpopo River itself at the confluence with major South African tributaries such as the Matlabas, Mokolo, Lephalala, Sand, Nwanedzi, Nzhelele and Luvuvhu Rivers. The DESC, PESC and the AEMC for the Limpopo will be applicable to the river stretches downstream from such confluences. For the purposes of the NWBM, tributaries flowing into the Limpopo from Botswana and Mocambique were excluded. The same situation applies to the Orange River at the Namibia-South Africa border. However, in this case the tributaries flowing into the Orange do not contribute significantly to the flow of the Olifants and the EISC, DESC and AEMC will based on the Orange River itself.

- The method concerns only lotic systems (i.e., streams and rivers and associated habitats such as lotic wetlands) and is not meant to be applied to lakes, pans, impoundments or estuaries. Although several of the components considered in this assessment could be expected to be generally applicable, the application of the procedure to systems other than rivers and streams has not been attempted.

- Where a quaternary catchment contains an estuary, this methodology should be applied only to the riverine part of the quaternary.

- Only the mainstem river in a quaternary should be considered in this assessment and not tributaries. The assessment of tributaries can be considered to be relevant at a sub-quaternary level which will not be addressed during this exercise. However, it must be realised that water-use where tributaries are involved should receive specific attention.

- In cases where a dam wall is present at or relatively close to the outlet of a quaternary, assessments for the determination of the AEMC for that quaternary will be based on the river upstream from the dam (i.e. upstream from the backwater effect of the dam) (Sellick pers.com. 1999).

- In cases where deterioration occurs along certain sections of the mainstem of a quaternary, but where there are still substantial less disturbed sections, the determination of the AEMC should be based on these less disturbed areas. The intention of this is that the ecological flow requirements of these less disturbed sections should be catered for. Proper determination of the AEMC in such cases would require assessment at sub-quaternary level.

- Generally, the proportion of the MAR that will be generated by the method of Hughes and Münster (1999) (Appendix R13) will be applicable to the downstream border (outlet) of a quaternary catchment.

- The present ecological status assessment should be considered primarily from an instream and riparian zone perspective. Although it is realised that the catchment itself plays a major role in the condition and functioning of rivers, the purpose of this procedure is not a to asssess catchment status.

- The riparian zone should broadly be regarded as that part of the river bordering the river channel. Usually characteristic plants species and/or vegetation structure provides an indication of the delineation of the riparian zone.

The sequence of actions required to determine ecological management classes for input into the hydrological model (Hughes & Münster 1999) are indicated in Figure C2 and are elaborated below.

The methodology provided here differs from the Kleynhans et al. (1998) approach in the sense that determinants are not separated into so-called primary and modifying determinants. What were previously considered as modifying determinants, are now treated as part of habitat determinants. This change is based on the evident over-estimation of the importance of modifying determinants in the previous version (Luger 1999b).

Ecological importance and sensitivity classes were assessed during the first round of provincial workshops in 1998/9. In most instances, the second round of provincial workshops will involve a general review of the ecological importance and sensitivity assessments of the first round. The second round of workshops is planned to be concerned primarily with assessing the PESC, restoration potential and the AEMC[2].

Assessment of ecological importance and sensitivity

Ecological importance of a river is an expression of its importance to the maintenance of ecological diversity and functioning on local and wider scales. Ecological sensitivity (or fragility) refers to the system's ability to resist disturbance and its capability to recover from disturbance once it has occurred (resilience) (Resh et al. 1988; Milner 1994). Both abiotic and biotic components of the system are taken into consideration in the assessment of ecological importance and sensitivity (Figure C2, step 1).

In terms of this assessment, ecological importance and sensitivity is a general and unrefined estimation. It is strongly biased towards the potential importance and sensitivity of the mainstem river per quaternary as it would be expected to appear under unimpaired conditions. This means that the present ecological status or condition (PESC) should not be considered in determining the ecological importance and sensitivity *per se.*

This approach estimates and classifies the ecological importance and sensitivity of the streams in a catchment by considering a number of components surmised to be indicative of these characteristics. This procedure can be followed regardless of the fact that delineation of quaternary catchments is not based on ecological principles. However, it must be realised that the ecological sensitivity and reality of the approach may be low due to the omission of an ecological typing framework.

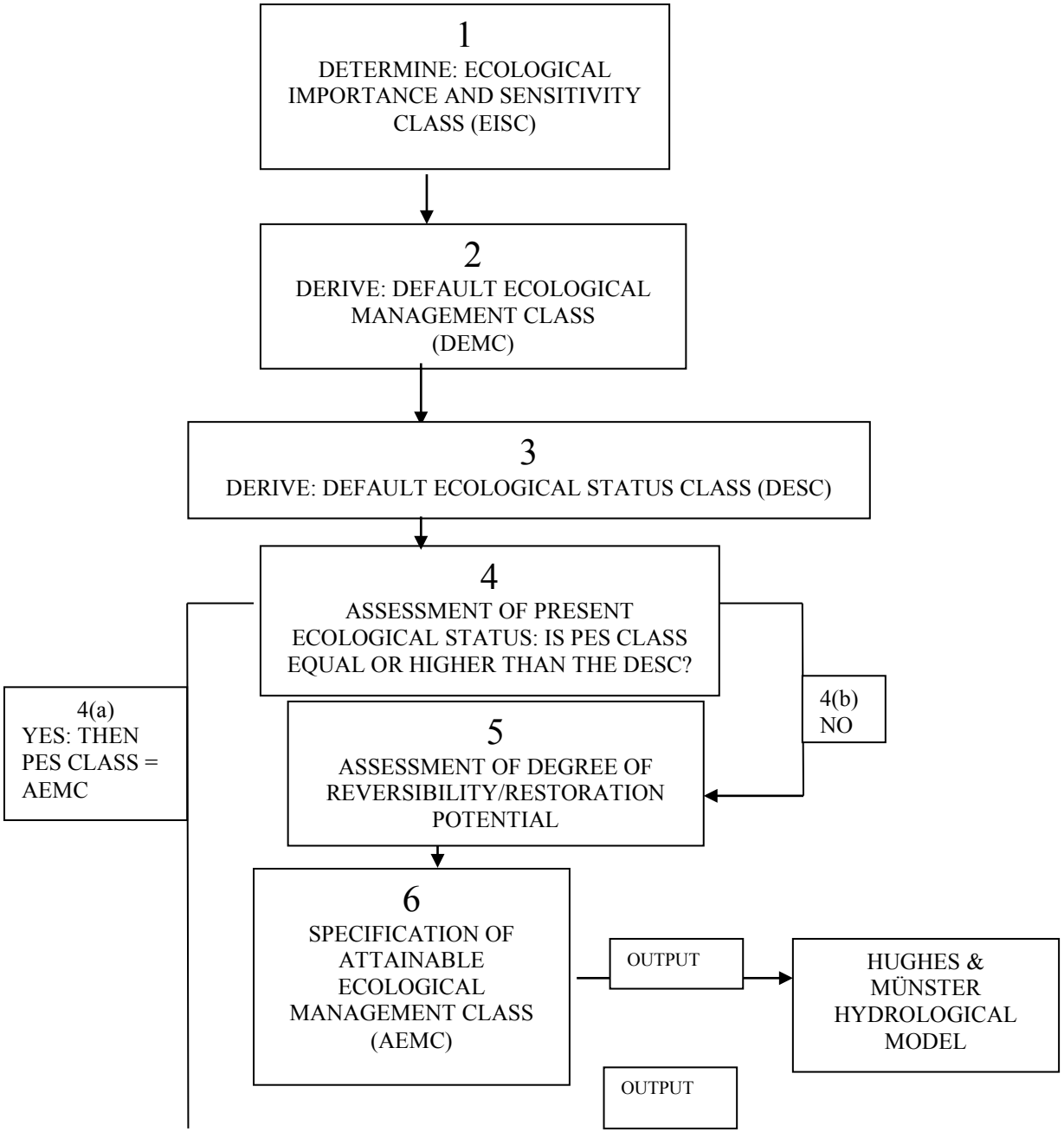

1
DETERMINE: ECOLOGICAL IMPORTANCE AND SENSITIVITY CLASS (EISC)
2
DERIVE: DEFAULT ECOLOGICAL MANAGEMENT CLASS (DEMC)
3
DERIVE: DEFAULT ECOLOGICAL STATUS CLASS (DESC)
4
ASSESSMENT OF PRESENT ECOLOGICAL STATUS: IS PES CLASS EQUAL OR HIGHER THAN THE DESC?
4(a)
YES: THEN PES CLASS = AEMC
4(b)
NO
5
ASSESSMENT OF DEGREE OF REVERSIBILITY/RESTORATION POTENTIAL
6
SPECIFICATION OF ATTAINABLE ECOLOGICAL MANAGEMENT CLASS (AEMC)
OUTPUT
HUGHES & MÜNSTER HYDROLOGICAL MODEL
OUTPUT

Figure C2: Flow diagram indicating the sequence of steps proposed for the determination of the attainable ecological management class in the determination of the WBDE.

The first step is to estimate the ecological importance and sensitivity of streams in quaternary catchments. The following ecological aspects should be considered as the basis for the estimation of ecological importance and sensitivity:

- The presence of rare and endangered species, unique species (i.e. endemic or isolated populations) and communities, intolerant species and species diversity should be taken into account for both the instream and riparian components of the river.
- Habitat diversity should also be considered. This can include specific habitat types such as reaches with a high diversity of habitat types, i.e. pools, riffles, runs, rapids, waterfalls, riparian forests, etc.
- With reference to the first and second points, biodiversity in its general form (i.e., Noss 1990) should be taken into account as far as the available information allows.
- The importance of the particular river or stretch of river in providing connectivity between different sections of the river, i.e. whether it provides a migration route or corridor for species should be considered.
- The presence of conservation or relatively natural areas along the river section should also serve as an indication of ecological importance and sensitivity.
- The sensitivity (or fragility) of the system and the resilience (i.e. the ability to recover following disturbance) of the system to environmental changes should also be considered. Consideration of both the biotic and abiotic components is included here.

This system should be regarded as a guideline for the professional ecological judgement of individuals familiar with a particular area. The assessors will score a number of biotic and habitat determinants considered to be important for the determination of ecological importance and sensitivity (Tables C1, C2 & C3). The median of these scores will be calculated to derive the ecological importance and sensitivity category. Assessors will then be required to compare this with their overall estimation of the ecological importance and sensitivity category (Table C1) of the mainstem river in a quaternary catchment.

It is advisable that assessors be able and required to substantiate and document their judgement to a reasonable degree for future revision. It is essential that this assessment be conducted by biologists familiar with the particular area in question or comparable areas.

There are 1946 quaternary catchments in South Africa (Schulze et al. 1997). In cases where there is a lack of information in a particular quaternary catchment, extrapolation of information from neigbouring catchments should be used. During the first round of provincial workshops it became apparent that it is often useful to group "like" quaternary catchments and in the Western Cape, only one quaternary catchment for each group was entered into the database. Where knowledge about riverine systems was low, the systems were compared to better known rivers and low confidence scorings were given (Luger 1999a). In some respects, the same approach was followed in the North West Province. This approach can be followed in other provinces where possible (especially where there is a lack of information). However, it was pointed out that in Kwazulu/Natal the large variation in river types provided little possibility of clumping quaternaries for purposes of assessing their classes (Chutter 1999).

Determinants

Generally, a four point (1 to 4) scoring system is used to assess the various aspects of ecological importance and sensitivity. In some cases a five point (0 to 4) scoring system is used (Table C2). Determinants are assessed according to biological determinants (Table C2) and aquatic habitat determinants (Table C3).

Table C1: Ecological importance and sensitivity categories.

Ecological Importance And Sensitivity Categories	General Description
Very high	Quaternaries that are considered to be unique on a national or even international level based on unique biodiversity (habitat diversity, species diversity, unique species, rare and endangered species). These rivers (in terms of biota and habitat) are usually very sensitive to flow modifications and have no or only a small capacity for use.
High	Quaternaries that are considered to be unique on a national scale due to biodiversity (habitat diversity, species diversity, unique species, rare and endangered species). These rivers (in terms of biota and habitat) may be sensitive to flow modifications but in some cases, may have a substantial capacity for use.
Moderate	Quaternaries that are considered to be unique on a provincial or local scale due to biodiversity (habitat diversity, species diversity, unique species, rare and endangered species). These rivers (in terms of biota and habitat) are usually not very sensitive to flow modifications and often have a substantial capacity for use.
Low/marginal	Quaternaries that are not unique at any scale. These rivers (in terms of biota and habitat) are generally not very sensitive to flow modifications and usually have a substantial capacity for use.

Due to the uniqueness of the Fynbos Biome, it was decided to treat the Western Cape somewhat differently with regard to some determinants in order to increase the applicability of the methodology in this part of the country (Luger 1999a & b). These modifications are indicated in the relevant tables.

Table C2: Biotic determinants (instream and riparian) for assessment of ecological importance and sensitivity.

Determinant*	Guidelines And Description	Scoring Guidelines
Rare and[@] endangered biota	Biota can be rare or endangered on a local, Provincial and National scale. Useful sources for this information include the South African Red Data Books that are suitable for assessment on a National scale. However, species (or taxa in the case of invertebrates) can be rare or endangered on a Provincial or local scale but not on a National scale. Professional judgement needs to be	Very High - rating=4; One or more species/taxon judged as rare or endangered on a National scale (i.e. SA Red Data Books). High - rating=3; One or more species/taxon judged to be rare or endangered on a Provincial/regional scale. Moderate - rating=2; More than one

Determinant*	Guidelines And Description	Scoring Guidelines
	utilised in such cases.	species/taxon judged to be rare or endangered on a local scale. Marginal - rating=1; One species/taxon judged as rare or endangered at a local scale. None - rating=0; No rare or endangered species/taxon at any scale

Determinant*	Guidelines And Description	Scoring Guidelines
Unique biota[@]	Endemic or uniquely isolated species populations (or taxa, i.e. in the case of invertebrates) that are not rare or endangered should be included here. This assessment should also consider local, Provincial and National scales and should be treated separately from rare and endangered species (i.e. the same species should not be considered). The assessment should be based on professional knowledge. Fynbos biome: Within this biome all the biota would be unique. The rivers were therefore assessed within the context of the biome for the Western Cape (Luger 1999a).	Very High - rating=4; One or more population (or taxon) unique on a National scale. For the Western Cape - rated on a biome scale. High - rating=3; One or more population (or taxon) judged to be unique on a Provincial/regional scale. For the Western Cape - rated on a sub-regional scale (i.e. northern, western, southern and karroid). Moderate - rating=2; More than one population (or taxon) judged to be unique on a local scale. Marginal - rating=1; One population (or taxon) judged to be unique at a local scale. None - rating=0; No population (or taxon) judged to be unique at any scale.
Intolerant biota	Intolerant biota includes those species (or taxa in the case of invertebrates) that are known (or derived or suspected) to be intolerant to decreased or increased flow conditions as well as changed physical habitat and altered water quality conditions related to decreased or increased flows. As little experimental information is available on the intolerance of indigenous biota, assessment should be based on professional judgement. Kwazulu/Natal: There is no quaternary without flow and everywhere that there is flow an invertebrate community dependent on flow develops. This would mean that every quaternary should be rated highly with respect to this criterion. The solution to the problem was to use only fish (Chutter 1999).	Very High - rating=4; A very high proportion of the biota is expected to be dependent on permanently flowing water during all phases of their life cycle. High - rating=3; A high proportion of the biota is expected to be dependent on permanently flowing water during all phases of their life cycle. Moderate - rating=2; A small proportion of the biota is expected to be dependent on permanently flowing water during some phases of their life cycle. Marginal - rating=1; A very low proportion of the biota is expected to be only temporarily dependent on flowing water for the completion of their life cycle. Sporadic and seasonal flow events expected to be sufficient. None - rating=0; Rarely if any biota expected

Determinant*	Guidelines And Description	Scoring Guidelines
		with any dependence on flowing water.
Species/taxon richness	Species/taxon richness can be assessed on a comparative basis according to a local, Provincial or National scale. Strictly, this kind of assessment should be based on the grouping of ecologically similar rivers. However, such a system is still under development and assessment will again to have to be based on professional judgement.	Very High - rating=4; Rated on a National scale. For the Western Cape - rated on a biome scale. High - rating=3; Rated on a Provincial/regional scale. For the Western Cape - rated on a sub-regional scale (i.e. northern, western, southern and karroid). Moderate - rating=2; Rated on a local scale. Marginal/low - rating=1; Not significant at any scale. (a rating of none is not appropriate in this context)

Notes on Table C2:

*:The current guidelines will mostly be applicable to vertebrates and vascular plants for which information is more readily available than for other groups. In cases where expert knowledge allows for the assessment of biota other than vertebrates and vascular plants, such information should be included. The taxonomic groups on which the assessment is based should be indicated. In cases where invertebrates (in particular) and other plants are used as indicators, the relevant scoring system may have to be adapted by the relevant ecological experts.

@:In the case of rare and endangered and unqiue biota: the highest of the possible scores should be provided, i.e.:

- If a species is rare and endangered on a national scale, it should be scored as very high for this determinant.
- If a species is rare and endangered on a regional scale but it is very unique on a national scale, it should be scored as very high for this determinant.

Table C3: Habitat (instream and riparian) determinants for assessment of ecological importance and sensitivity.

Determinant*	Guidelines And Description	Scoring Guidelines
Diversity of aquatic habitat types or features	Diversity of habitat types in a river delineation should be assessed according to local, Provincial and National scales (riffles, rapids, runs, pools and backwaters and the associated marginal areas and substrate types, lotic wetlands (source sponges, floodplain habitat types) and the riparian zone). Assessment should again be based on professional judgement.	Very High - rating=4; Rated on a National scale. High - rating=3; Rated on a Provincial/regional scale. Moderate - rating=2; Rated on a local scale Marginal/low - rating=1; Not significant at any scale. (a rating of none is not appropriate in this context)

Determinant*	Guidelines And Description	Scoring Guidelines
Refuge value of habitat types	The functionality of the habitat types present should be assessed in terms of their ability to provide refugia to biota during periods of environmental stress on a local, Provincial and National scale. Assessment is based on available information and expert judgement.	Very High - rating=4; Rated on a National scale. High - rating=3; Rated on a Provincial/regional scale. Moderate - rating=2; Rated on a local scale Marginal/low - rating=1; Not significant at any scale. (a rating of none is not appropriate in this context)
Sensitivity of habitat to flow changes	This assessment should essentially take into account the size of the stream as well as the habitat types available. The presumption is that only a limited decrease or increase in the flow (and the related depth and width) of certain rivers (often "smaller" streams) will result in particular physical habitat types (i.e. riffles), becoming unsuitable for biota as compared to "larger" streams. Assessment is based on available information and expert judgement.	Very High - rating=4; Streams of a particular size and with abundant habitat types highly sensitive to flow decreases or increases at all times High - rating=3; Streams of a particular size and with some habitat types being highly sensitive to flow decreases or decreases at all times. Moderate - rating=2; Streams of a particular size and with some habitat types being susceptible to flow decreases or increases during certain seasons. Marginal/low - rating=1; Streams of a particular size and with habitat types rarely sensitive to flow decreases or increases. (a rating of none is not appropriate in this context)
Sensitivity to flow related water quality changes	This assessment should also consider the size and flow of the stream in terms of its sensitivity to water quality changes. A decrease in the natural flow volume may, for example, result in a diminished assimilative capacity (in the situation where effluent forms part of the total flow volume) or may cause natural water quality variables (i.e. water temperature and oxygen) to reach levels detrimental	Very High - rating=4; Streams of a particular size (usually "small") and with abundant habitat types highly sensitive to water quality changes related to flow decreases or increases at all times. High - rating=3; Streams of a particular size (usually "small") and with some habitat types being highly sensitive to water quality related changes related to

Determinant*	Guidelines And Description	Scoring Guidelines
	for biota (also applicable to increases in flow). The assumption regarding the sensitivity of "smaller" streams is also applicable here. In terms of organic pollution load, it has been pointed out that slow flowing deep rivers would be impacted over greater distances than fast flowing shallow rivers where re-areation rates would be high (Chutter 1999). Assessment is based on available information and expert judgement.	flow decreases or increases at all times. Moderate - rating=2; Streams of a particular size (often "larger") and with some habitat types being sensitive to water quality related flow decreases or increases during certain seasons. Marginal/low - rating=1; Streams of a particular size (often "larger") and with habitat types rarely sensitive to water quality change related to flow decreases or increases. (a rating of none is not appropriate in this context)
Migration route/corridor for instream and riparian biota	The importance of a specific stream delineation in terms of the link it provides for the upstream and downstream biological functioning of other sections of the stream, is indicated here (i.e. connectivity). In essence the biological connectivity provided by a particular stream delineation can influence its ecological importance and result in an adapted (i.e. higher) rating than it would have had if was assessed only on its own. Assessments should be based on the results of ratings for individual stream network delineations, professional judgment and available information. The sensitivity of the migration route/corridor to modifications and disruptions form part of the assessment. Within this context, headwater quaternaries would mostly have a low importance as a migration route /corridor (at a sub-quaternary scale, migration route/corridor may be more important)	Very high - rating=4; The stream delineation is a critical link in terms of connectivity for the survival of biota upstream and downstream and is very sensitive to modification. High - rating=3; The stream delineation is an important link in terms of connectivity for the survival of biota upstream and downstream and is sensitive to modification. Moderate - rating=2; The stream delineation is a moderately important link in terms of connectivity for the survival of biota upstream and downstream and is moderately sensitive to modification. Marginal/Low - rating=1; The stream delineation is a marginally/low important link in terms of connectivity for the survival of biota upstream and downstream and has a marginal sensitivity to modification None – rating=0; The stream delineation is not of any importance in terms of connectivity for the survival of biota

Determinant*	Guidelines And Description	Scoring Guidelines
		upstream and downstream.

Determinant*	Guidelines And Description	Scoring Guidelines
National parks, Wilderness areas, Nature reserves Natural Heritage sites Natural areas	The presence of conservation (i.e. National Parks, Wilderness areas and Nature Reserves) and natural areas (i.e. unproclaimed, relatively unmodified/undisturbed areas) within a stream delineation will logically place an additional emphasis on the ecological importance and sensitivity of a stream. The importance of such areas for the conservation of the aquatic ecological diversity on different scales must be judged, i.e. the presence of a quaternary in a conservation or natural area does not automatically indicates a high score.	Very high - score=4; The stream delineation is present within an area very important for the conservation of ecological diversity on a National and even international scale. High - score=3; The stream delineation is present within an area important for the conservation of ecological diversity on a National scale. Moderate - score=2; The stream delineation is present within an area important for the conservation of ecological diversity on a provincial /regional scale. Marginal/Low - score=1; The stream delineation is present within an area important for the conservation of ecological diversity on a local scale. Very low - score=0; The stream delineation is not present within an area important for the conservation of ecological diversity on any scale.

Notes on Table C3:
*: The scoring system indicated here is mainly applicable to vertebrates. In cases where invertebrates (in particular) and plants are used as indicators, the relevant scoring system may have to be adapted by the relevant ecological experts.

Determining the Ecological Importance and Sensitivity Category (EISC)

In determining the ecological importance and sensitivity (Figure C2, step 1), no weighting of the relative importance of the various components of ecological importance and sensitivity is proposed at this stage. However, it is required that the relative confidence of each rating also be estimated based on a scale of four categories as indicated in Table C4. The possibility of using confidence ratings as indicators of the relative weights of various determinants is currently receiving attention.

The median score for the biotic and habitat determinants is interpreted as indicated in Table C5.

Table C4: Confidence ratings for biotic and habitat determinants.

Confidence Rating	*Confidence Score*
Very high confidence	4
High confidence	3
Moderate confidence	2
Marginal/Low confidence	1

Table C5: Ecological importance and sensitivity categories. Interpretation of median scores for biotic and habitat determinants.

Ecological Importance And Sensitivity Category*	Range Of Median
Very high Quaternaries that are considered unique on a national or even international level based on unique biodiversity (habitat diversity, species diversity, unique species, rare and endangered species). These rivers (in terms of biota and habitat) are usually very sensitive to flow modifications and have no or only a small capacity for use.	>3 and <=4
High Quaternaries that are considered to be unique on a national scale due to biodiversity (habitat diversity, species diversity, unique species, rare and endangered species). These rivers (in terms of biota and habitat) may be sensitive to flow modifications but may have a substantial capacity for use.	>2 and <=3
Moderate Quaternaries that are considered to be unique on a provincial or local scale due to biodiversity (habitat diversity, species diversity, unique species, rare and endangered species). These rivers (in terms of biota and habitat) are usually not very sensitive to flow modifications and often have a substantial capacity for use.	>1 and <=2
Low/marginal Quaternaries that are not unique at any scale. These rivers (in terms of biota and habitat) are generally not very sensitive to flow modifications and usually have a substantial capacity for use.	>0 and <=1

Notes on Table C5:
*: Quaternaries refer to the mainstem river in a quaternary.

Deriving the Default Ecological Management Class (DEMC)

The four ecological importance and sensitivity categories can be regarded as equivalent to the four default ecological management classes (DEMC; A to D) proposed for the purposes of the National Water Act (Table C6), i.e. it is suggested that a very high ecological importance and sensitivity should justify the assignment of a very high ecological management class, etc. Default ecological management classes are defined in terms of the sensitivity of a system to disturbance and the risk of damaging the system (i.e. its capacity for sustainability and self-recovery) (Table C7) (Figure C2, step 2). Based on this, there would be desire to manage the system within particular ranges of protection.

Table C6: Default ecological management classes for rivers (adapted from Kleynhans 1996 and Kleynhans et al. 1998).

Default Ecological Management Classes	**Description Of Perceived Conditions And Allowable Risk**
A Highly sensitive systems: No human induced hazards	Highly sensitive systems. The natural abiotic template should not be modified. The characteristics of the resource should be determined by unmodified natural disturbance regimes. There should be no human induced hazards to the abiotic and biotic maintenance of the resource.
B Sensitive systems: Small risk allowed	Sensitive systems. Only a small risk of modifying the natural abiotic template and exceeding the resource base should be allowed. Although the risk to the well-being and survival of especially intolerant biota (depending on the nature of the disturbance) at a very limited number of localities may be slightly higher than expected under natural conditions, the resilience and adaptability of biota must not be compromised. The impact of acute disturbances must be totally mitigated by the presence of sufficient refuge areas**.**
C Moderately sensitive systems: Moderate risk allowed	Moderately sensitive systems. A moderate risk of modifying the abiotic template and exceeding the resource base may be allowed. Risks to the well being and survival of intolerant biota (depending on the nature of the disturbance) may generally be increased with some reduction of resilience and adaptability at a small number of localities. However, the impact of local and acute disturbances must at least partly be mitigated by the presence of sufficient refuge areas.
D Resilient systems: Large risk allowed	Resilient systems. A large risk of modifying the abiotic template and exceeding the resource base may be allowed. Risks to the well-being and survival of intolerant biota (depending on the nature of the disturbance) may be allowed to generally increase substantially with resulting low abundances and frequency of occurrence, and a reduction of resilience and adaptability at a large number of localities. However, the associated increase in the abundance of tolerant species must not be allowed to assume pest proportions. The impact of local and acute disturbances must at least to some extent be mitigated by refuge areas.

Table C7: The relationship between ecological importance and sensitivity categories and default ecological management classes.

Ecological Importance and Sensitivity Category (Cf.	**Default Ecological Management Class** (Cf. Table C6)

Table C5)	A: No human induced hazards	B: Small risk allowed	C: Moderate risk allowed	D: Large risk allowed
Very High	X			
High		X		
Moderate			X	
Marginal/Low				X

Deriving the Default Ecological Status Class (DESC)[3]

The default ecological management class (DEMC) can be defined in terms of the default ecological status class (DESC; Table C8) (Table C9). In terms of this document, management (DEMC) would be based on the EISC with the end-point being the default status or condition of a class.

Table C8: Default ecological status classes (adapted from Kleynhans 1996).

Default Ecological Status Class	Description of General Conditions
A	Unmodified, natural.
B	Largely natural with few modifications. A small change in natural habitats and biota can take place but the ecosystem functions should essentially be unchanged.
C	Moderately modified. A moderate change in natural habitat and biota can take place but the basic ecosystem functions should still predominantly be unchanged.
D	Largely modified. A large change in natural habitat, biota and basic ecosystem functions can occur.

Table C9: The relationship between default ecological management classes and default ecological status classes.

Default Ecological Status Classes (Cf. Table C8)	**Default Ecological Management Classes** (Cf. Table C6)			
	A: No human induced hazards	B: Small risk allowed	C: Moderate risk allowed	D: Large risk allowed
A: Unmodified, natural	X			
B: Largely natural		X		
C: Moderately modified			X	

D: Largely modified				X

Assessment of present ecological status classes (PESC)

For the purpose of the WBDE, habitat integrity is considered as a broad preliminary indicator of present ecological status (PES) (i.e. ecological integrity, condition, naturalness) (Figure C2, step 4). Due to the detail required, it is not possible to use the complete index of habitat integrity (Appendix R5) or the shortened method proposed for the intermediate Rreserve determination (Appendix R4). A much simplified approach is proposed that can be used for each quaternary and that is based on local expert knowledge. The attributes that should be considered within the context of the degree to which they modify instream and riparian habitat and impact on native biota are indicated in Table C10.

Table C11 provides scoring and rating guidelines for the estimation of the PESC. Each of the attributes is scored and the mean calculated. The mean is used to place the main river in the quaternary catchment in a particular present ecological status class. In cases where any of the attributes scores < 2 (i.e., it is considered to be seriously or critically modified) this score and not the mean taken into consideration. The latter approach is based on the assumption that extensive degradation of any of the river attributes may determine the PES. However, as is the case with the estimation of the ecological importance and sensitivity, the mean on which the assessment of the PES is based, should be regarded as a guideline and should also be tested against the opinion of local experts as guided by Table C11. Biological integrity is not directly estimated through this approach and it is acknowledged that in some systems or parts of systems, information on biological integrity is available. In such cases, the information on biological integrity can be used as a check of the PES assessment. The mean (or default low rating due to individual scores of serious or critical modification) is used to relate the river to a particular PES Category C11).

As the NWBM is concerned with the quantity of water, particular emphasis must be placed on flow modification (cf. Table C10). If the flow modification category (FMC) as estimated based on the present situation is higher (i.e. closer to natural with regard to its impact on biota and habitats) than the overall PESC itself, this must be indicated specifically and taken into account (emphasized or flagged) when using this assessment system. It is obvious that such a state of affairs needs more specific attention. This situation is likely to occur only in a limited number of cases and it is proposed that this be indicated with regard to the PESC assessment.

Table C10: Attributes to be assessed for determination of present ecological status.

Assessment Attributes	Considerations for Assessment of Attributes
Flow	Relative deviation from the expected natural - modification/ deterioration of habitat due to abstraction and/or flow regulation.
Inundation	Relative degree of inundation by weirs (or similar structures) and impoundments - loss of instream habitat and the riparian zone as well as the possible fragmentation effect on biological populations and communities.
Water quality	Water quality (relative degree of modification from the expected natural, and its perceived biological impact and significance).
Stream bed condition	Stream bed condition (relative degree of modification as caused by disturbances such as sedimentation, covering by excessive algal growth related to eutrophication, etc.).
Introduced instream	Species involved, their characteristics and severity of impact on native biota - i.e.,

biota	impact on physical habitat and competition, predation.
Riparian or stream bank condition	Riparian or stream bank condition (relative deviation from the expected natural situation as indicated by disturbances such as removal of vegetation, invasive vegetation, erosion, etc.).

Table C11: Scoring and rating guidelines for present ecological status estimation (adapted from Kleynhans 1996).

Scoring Guidelines Per Attribute*	**Relative Confidence Of Score Of Attribute (Applicable To All Attributes)**	**Interpretation Of Mean* Of Scores For All Attributes: Rating Of Present Ecological Status Category (PESC)**
Natural, unmodified - score=5.	Very high confidence - score=4	WITHIN GENERAL ACCEPTABLE RANGE
		Category A >4; Unmodified, or approximates natural condition.
Largely natural - score=4.	High confidence - score=3	Category B >3 and <=4; Largely natural with few modifications, but with some loss of natural habitats.
Moderately modified- score=3.	Moderate confidence - score=2	Category C >2 and <=3; moderately modified, but with some loss of natural habitats.
Largely modified - score=2.	Marginal/Low confidence - score=1	Category D =2; largely modified. A large loss of natural habitats and basic ecosystem functions has occurred.
		OUTSIDE GENERAL ACCEPTABLE RANGE
Seriously modified - rating=1.		Category E >0 and <2; seriously modified. The losses of natural habitats and basic ecosystem functions are extensive.

Critically modified - rating=0.		Category F 0; critically modified. Modifications have reached a critical level and the system has been modified completely with an almost complete loss of natural habitat.

Notes on Table C11:
*: If any of the attributes are rated <2, then the lowest rating for the attribute and not the mean should be taken as indicative of the PES category.

Assessing the reversibility of modifications, and specification of the AEMC

The PESC is compared with the DESC (Figure C2, step 4):

- If it falls in the same class as the DESC or is higher than the DESC, the PESC is taken as the attainable ecological management class (AEMC) (Figure C2, step 4(a)).

- If the PESC is lower than the DESC, the possibility of attaining the DESC has to be assessed (Figure C2, step 4(b)). Gonzalez (1996) proposes a system of four categories indicating distance from the "default future condition" (comparable to the DESC). In the context of the current approach, categories are formulated in terms of the PESC and DESC (adapted from Gonzalez 1996):

    - Close; PESC≥DESC
    - Moderate; PESC (for classes B-D) is 1 class lower than the DESC (for Classes A-C)
    - Far; PESC (for classes C to D) is 2 classes lower than the DESC (for Classes A-B)
    - Very far; PESC < class D when the acceptable range of the DESC can potentially vary from class A to class D (Table C6).

In general, it can be accepted that the farther the PESC is below the DESC, the more effort would be required to realise the DESC. However, the kind of impacts that resulted in a particular PESC may vary in terms of the possibility of improving them in order to achieve restoration of the system up to the DESC. It follows that each of the attributes will have to be assessed in terms of the perceived possibility of restoring them to a condition where such an improvement will lead to an improvement of the PESC. Some changes may be practically irreversible within the limits of time and effort (including financial resources) required to achieve this. While five years is a commonly used time frame for many institutions and is considered a realistic period for attempting to estimate future conditions (Gonzalez 1996), it is difficult to put limits to what can be regarded as realistic efforts. Nevertheless, if three broad categories of threat to ecosystems are considered, it is possible to obtain some perception of the effort required to restore ecosystems (adapted from: Gonzalez 1996):

- Ecosystem degradation; occurs mainly through pollution, but could also be from selective removal of species (e.g., overfishing, overharvesting, etc.). Restoration potential is probably moderate to high.

- Ecosystem alteration; major physical changes (dredging, water diversion) and major removal of species (i.e., extinction). In terms of rivers, it is proposed that factors such as flow modification, water abstraction (i.e., indicators of physical habitat modification) would also be included here. Restoration potential is probably low to moderate.

- Ecosystem removal; the highest level of alteration (e.g., destruction of wetlands due to urbanisation, etc.). In terms of rivers, modifications such as inundation, canalisation and concreting, destruction of the riparian zone and the macro-geomorphological features of the river and its catchment could conceivably be included here. Restoration potential is probably low.

It must be emphasised that for the NWBM, the desktop estimate is required in order to estimate the ecological flow requirements. This means that the assessment of the possibility of improving the ecological conditions must be approached in terms of the flow situation, i.e. degradation of the system that occurred because of purely non-flow related changes should not be included as part of the estimation of the restoration potential of a river. Table C12 provides a framework for the assessment of the restoration potential of rivers and to estimate the AEMC.

Table C12: The assessment of the restoration potential of different aspects of the present ecological status class of rivers, as a basis for deriviation of the AEMC.

Modification	**Present Degree of Modification: Possible Score** (Cf. Table C9)	**Confidence***	**Attainable Improvement (Flow or Flow Related) Within 5 Years: Possible Score**	**Confidence***
Flow	0-5	1-4	0-5	1-4
Inundation	0-5	1-4	#	#
Water quality	0-5	1-4	0-5	1-4
Stream bed condition	0-5	1-4	0-5	1-4
Introduced instream biota	0-5	1-4	#	#
Riparian or stream bank condition	0-5	1-4	0-5	1-4
MEAN	PESC: 0-5		AEMC:0-5	
CLASS	PESC: A - F (possible)		AEMC: A -D (acceptable)	

Notes on Table C12:
*: 0=None; 1=Low; 2=Moderate; 3=High; 4=Very high. #: Modifications not likely to be improved by flow related improvements. The score for the present degree of modification is taken as a default.

The output of this process is the AEMC (Figure C2, steps 4(a) and 5; Table C12) which is used as an input into the hydrological model of Hughes and Münster (1999). As indicated in Table C11, only ecological management classes from A-D fall in the acceptable range. This means that regarding the AEMC, only classes A - D would be acceptable. When the assessment of the improvement indicates that a class better than E or F is not attainable in 5 years, the AEMC will have to be taken as class D as an input to the hydrological model. However, it must be realised that a class of E or F may indicate a practically irreversible change of the ecosystem. In such a case it would be appropriate to consider the ecological management class in terms of ecosystem health rather than integrity (Karr 1996; cf. Introduction) and desirable standards will have be set according to this. This is, however, not part of the WBDE.

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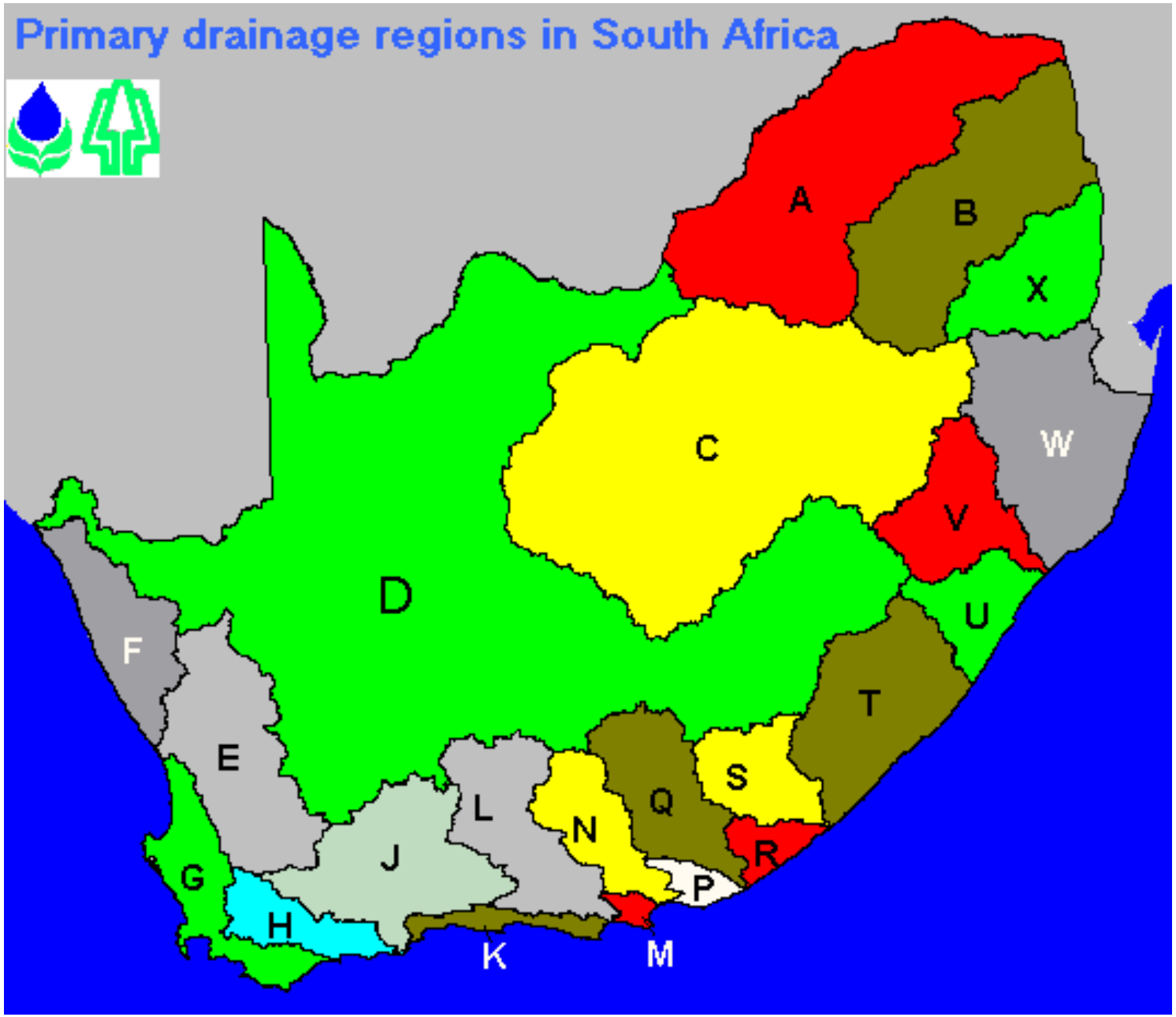

RESULTS OF THE PROVINCIAL WORKSHOP ASSESSMENTS

Results

The results of the Provincial workshop assessments are presented in both table and graphical format (Appendix A and B respectively). Only the Tables contain the rating for the Present AEMC.

Appendix A

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Appendix B:

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The following organizations and individuals were involved in the Provincial assessments. Without their knowledge and contributions this effort would not have been possible.

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Table 1: Ratings for quaternary catchments of primary drainage A (Fig. 2 – 5).

QUAT.No.	PROVINCE	RIVERS	EISC	DEMC	PESC	BEST AEMC
A10A	NORTH WEST	Lehurutshe	HIGH	B: SMALL RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL
A10B	NORTH WEST	LEHURUTHSE	LOW	D: LARGE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
A10C	NORTH WEST	Lehurutshe?	LOW	D: LARGE RISK ALLOWED	B: LARGELY NATURAL	A: UNMODIFIED, NATURAL
A21A	GAUTENG	SES MYL SPRUIT	LOW	D: LARGE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
A21B	GAUTENG	HENNOPS	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
A21C	GAUTENG	JUKSKEI	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
A21D	GAUTENG	BLOUBANKSPRUIT	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL
A21E	GAUTENG	CROCODILE	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL
A21F	NORTH WEST	MAGALIES	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL
A21G	NORTH WEST	SKEERPOORT	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL
A21H	NORTH WEST	CROCODILE	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
A21J	NORTH WEST	CROCODILE	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL
A21K	NORTH WEST	STERKSTROOM	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL
A21L	NORTH WEST	CROCODILE	MODERATE	C: MODERATE RISK ALLOWED	D: LARGELY MODIFIED	D: LARGELY MODIFIED
A22A	NORTH WEST	ELANDS	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL
A22B	NORTH WEST	KOSTER RIVER	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL
A22C	NORTH WEST	SELONS	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL
A22D	NORTH WEST	SELONS	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
A22E	NORTH WEST	ELANDS R	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
A22F	NORTH WEST	ELANDS	MODERATE	C: MODERATE RISK ALLOWED	D: LARGELY MODIFIED	C: MODERATELY MODIFIED
A22G	NORTH WEST	HEX RIVER	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL
A22H	NORTH WEST	HEX RIVER	MODERATE	C: MODERATE RISK ALLOWED	D: LARGELY MODIFIED	C: MODERATELY MODIFIED
A22J	NORTH WEST	HEX	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
A23A	GAUTENG	PIENAARS	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
A23B	NORTH WEST	PIENAARS	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL
A23C	GAUTENG	PIENAARS	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL
A23D	GAUTENG	APIES RIVER	MODERATE	C: MODERATE RISK ALLOWED	D: LARGELY MODIFIED	C: MODERATELY MODIFIED
A23E	GAUTENG	APIES RIVER	MODERATE	C: MODERATE RISK ALLOWED	D: LARGELY MODIFIED	C: MODERATELY MODIFIED
A23F	GAUTENG	APIES	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL
A23G	NORTH WEST	PLAT RIVER	LOW	D: LARGE RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL
A23H	NORTH WEST	RIETSPRUIT	LOW	D: LARGE RISK ALLOWED	B: LARGELY NATURAL	B: LARGELY NATURAL
A23J	NORTH WEST	PIENAARS RIVER	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL
A23K	NORTH WEST	SAND RIVER	LOW	D: LARGE RISK ALLOWED	B: LARGELY NATURAL	B: LARGELY NATURAL
A23L	NORTH WEST	PIENAARS	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
A24A	NORTH WEST	CROCODILE	MODERATE	C: MODERATE RISK ALLOWED	D: LARGELY MODIFIED	C: MODERATELY MODIFIED
A24B	NORTH WEST	CROCODILE	MODERATE	C: MODERATE RISK ALLOWED	D: LARGELY MODIFIED	C: MODERATELY MODIFIED
A24C	NORTH WEST	CROCODILE	MODERATE	C: MODERATE RISK ALLOWED	D: LARGELY MODIFIED	C: MODERATELY MODIFIED
A24D	NORTH WEST	BIERSPRUIT	LOW	D: LARGE RISK ALLOWED	B: LARGELY NATURAL	B: LARGELY NATURAL
A24E	NORTH WEST	BIERSPRUIT	LOW	D: LARGE RISK ALLOWED	B: LARGELY NATURAL	B: LARGELY NATURAL
A24F	NORTH WEST	BIERSPRUIT	LOW	D: LARGE RISK ALLOWED	B: LARGELY NATURAL	B: LARGELY NATURAL
A24G	NORTH WEST	SAND RIVER	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL
A24H	NORTH WEST	CROCODILE	MODERATE	C: MODERATE RISK ALLOWED	D: LARGELY MODIFIED	D: LARGELY MODIFIED
A24J	NORTH WEST	CROCODILE	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
A31A	NORTH WEST	MARICO & MARICO OOG	HIGH	B: SMALL RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL

QUAT.No.	PROVINCE	RIVERS	EISC	DEMC	PESC	BEST AEMC
A31B	NORTH WEST	MARICO	HIGH	B: SMALL RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL
A31C	NORTH WEST	MALMANIE OOG	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
A31D	NORTH WEST	KLEIN MARICO	LOW	D: LARGE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
A31E	NORTH WEST	KLEIN MARICO	LOW	D: LARGE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
A31F	NORTH WEST	GROOT MARICO	LOW	D: LARGE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
A31G	NORTH WEST	GROOT MARICO	LOW	D: LARGE RISK ALLOWED	D: LARGELY MODIFIED	C: MODERATELY MODIFIED
A31H	NORTH WEST		LOW	D: LARGE RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL
A31J	NORTH WEST		LOW	D: LARGE RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL
A32A	NORTH WEST	GROOT MARICO	LOW	D: LARGE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
A32B	NORTH WEST		LOW	D: LARGE RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL
A32C	NORTH WEST	GROOT MARICO (VERY SMALL SECTION BELOW DAM)	LOW	D: LARGE RISK ALLOWED	C: MODERATELY MODIFIED	E - F: > E NOT ATTAINABLE IN 5 YR - USE D AS DEFAULT
A32D	NORTH WEST	GROOT MARICO	LOW	D: LARGE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
A32E	NORTH WEST	TRIB MARICO	LOW	D: LARGE RISK ALLOWED	B: LARGELY NATURAL	B: LARGELY NATURAL
A41A	NORTHERN PROVINCE	Mathlabas (main)	HIGH	B: SMALL RISK ALLOWED	B: LARGELY NATURAL	B: LARGELY NATURAL
A41B	NORTHERN PROVINCE	Mathlabas	LOW	D: LARGE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
A41C	NORTHERN PROVINCE		LOW	D: LARGE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
A41D	NORTHERN PROVINCE	AB	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
A41E	NORTHERN PROVINCE	Limpopo	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
A42A	NORTHERN PROVINCE	KLEIN SAND ?	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
A42B	NORTHERN PROVINCE	GROOTSPRUIT	HIGH	B: SMALL RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
A42C	NORTHERN PROVINCE	MOKOLO	MODERATE	C: MODERATE RISK ALLOWED	D: LARGELY MODIFIED	D: LARGELY MODIFIED
A42D	NORTHERN PROVINCE	GROENSPRUIT?	MODERATE	C: MODERATE RISK ALLOWED	B: LARGELY NATURAL	B: LARGELY NATURAL
A42E	NORTHERN PROVINCE	MOKOLO	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
A42F	NORTHERN PROVINCE	MOKOLO	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
A42G	NORTHERN PROVINCE	MOKOLO	HIGH	B: SMALL RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
A42H	NORTHERN PROVINCE	MOKOLO	MODERATE	C: MODERATE RISK ALLOWED	D: LARGELY MODIFIED	D: LARGELY MODIFIED
A42J	NORTHERN PROVINCE	MOKOLO	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
A50A	NORTHERN PROVINCE	Palala	HIGH	B: SMALL RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED

QUAT.No.	PROVINCE	RIVERS	EISC	DEMC	PESC	BEST AEMC
A50B	NORTHERN PROVINCE	Palala	HIGH	B: SMALL RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
A50C	NORTHERN PROVINCE	Melk	MODERATE	C: MODERATE RISK ALLOWED	D: LARGELY MODIFIED	D: LARGELY MODIFIED
A50D	NORTHERN PROVINCE	Palala	HIGH	B: SMALL RISK ALLOWED	B: LARGELY NATURAL	B: LARGELY NATURAL
A50E	NORTHERN PROVINCE	Palala	HIGH	B: SMALL RISK ALLOWED	D: LARGELY MODIFIED	D: LARGELY MODIFIED
A50F	NORTHERN PROVINCE	Palala	HIGH	B: SMALL RISK ALLOWED	D: LARGELY MODIFIED	D: LARGELY MODIFIED
A50G	NORTHERN PROVINCE	Palala	MODERATE	C: MODERATE RISK ALLOWED	D: LARGELY MODIFIED	D: LARGELY MODIFIED
A50H	NORTHERN PROVINCE	Palala	MODERATE	C: MODERATE RISK ALLOWED	D: LARGELY MODIFIED	D: LARGELY MODIFIED
A50J	NORTHERN PROVINCE		LOW	D: LARGE RISK ALLOWED	A: UNMODIFIED, NATURAL	A: UNMODIFIED, NATURAL
A61A	NORTHERN PROVINCE	KLEIN NYL	MODERATE	C: MODERATE RISK ALLOWED	D: LARGELY MODIFIED	D: LARGELY MODIFIED
A61B	NORTHERN PROVINCE	NYL	MODERATE	C: MODERATE RISK ALLOWED	D: LARGELY MODIFIED	C: MODERATELY MODIFIED
A61C	NORTHERN PROVINCE	NYL	HIGH	B: SMALL RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
A61D	NORTHERN PROVINCE	NYL	HIGH	B: SMALL RISK ALLOWED	B: LARGELY NATURAL	B: LARGELY NATURAL
A61E	NORTHERN PROVINCE	NYL	HIGH	B: SMALL RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
A61F	NORTHERN PROVINCE	NYL	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
A61G	NORTHERN PROVINCE	NYL	HIGH	B: SMALL RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
A61H	NORTHERN PROVINCE	STERK RIVER	MODERATE	C: MODERATE RISK ALLOWED	D: LARGELY MODIFIED	C: MODERATELY MODIFIED
A61J	NORTHERN PROVINCE	STERK RIVER	MODERATE	C: MODERATE RISK ALLOWED	D: LARGELY MODIFIED	D: LARGELY MODIFIED
A62A	NORTHERN PROVINCE	MOKAMOLE	LOW	D: LARGE RISK ALLOWED	B: LARGELY NATURAL	B: LARGELY NATURAL
A62B	NORTHERN PROVINCE	MOGALAKWENA	LOW	D: LARGE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
A62C	NORTHERN PROVINCE	MOGALAKWENA	LOW	D: LARGE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
A62D	NORTHERN PROVINCE	RIETSPRUIT	LOW	D: LARGE RISK ALLOWED	B: LARGELY NATURAL	B: LARGELY NATURAL
A62E	NORTHERN PROVINCE	SEEPABANA	LOW	D: LARGE RISK ALLOWED	B: LARGELY NATURAL	A: UNMODIFIED, NATURAL
A62F	NORTHERN PROVINCE		LOW	D: LARGE RISK ALLOWED	B: LARGELY NATURAL	A: UNMODIFIED, NATURAL

QUAT.No.	PROVINCE	RIVERS	EISC	DEMC	PESC	BEST AEMC
A62G	NORTHERN PROVINCE	MOGALAKWENA	LOW	D: LARGE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
A62H	NORTHERN PROVINCE		LOW	D: LARGE RISK ALLOWED	B: LARGELY NATURAL	A: UNMODIFIED, NATURAL
A62J	NORTHERN PROVINCE	MOGALAKWENA	LOW	D: LARGE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
A63A	NORTHERN PROVINCE	MOGALAKWENA	MODERATE	C: MODERATE RISK ALLOWED	D: LARGELY MODIFIED	D: LARGELY MODIFIED
A63B	NORTHERN PROVINCE	MOGALAKWENA	MODERATE	C: MODERATE RISK ALLOWED	D: LARGELY MODIFIED	D: LARGELY MODIFIED
A63C	NORTHERN PROVINCE		LOW	D: LARGE RISK ALLOWED	A: UNMODIFIED, NATURAL	A: UNMODIFIED, NATURAL
A63D	NORTHERN PROVINCE	MOGALAKWENA	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
A63E	NORTHERN PROVINCE	KOLOPE	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL
A71A	NORTHERN PROVINCE	SAND	LOW	D: LARGE RISK ALLOWED	D: LARGELY MODIFIED	C: MODERATELY MODIFIED
A71B	NORTHERN PROVINCE	SAND	LOW	D: LARGE RISK ALLOWED	B: LARGELY NATURAL	A: UNMODIFIED, NATURAL
A71C	NORTHERN PROVINCE	SAND	LOW	D: LARGE RISK ALLOWED	C: MODERATELY MODIFIED	A: UNMODIFIED, NATURAL
A71D	NORTHERN PROVINCE	SAND	LOW	D: LARGE RISK ALLOWED	C: MODERATELY MODIFIED	A: UNMODIFIED, NATURAL
A71E	NORTHERN PROVINCE	HOU RIVIER	LOW	D: LARGE RISK ALLOWED	B: LARGELY NATURAL	A: UNMODIFIED, NATURAL
A71F	NORTHERN PROVINCE	STRYDOMLOOP	LOW	D: LARGE RISK ALLOWED	B: LARGELY NATURAL	A: UNMODIFIED, NATURAL
A71G	NORTHERN PROVINCE	HOUT	LOW	D: LARGE RISK ALLOWED	D: LARGELY MODIFIED	A: UNMODIFIED, NATURAL
A71H	NORTHERN PROVINCE	SAND	MODERATE	C: MODERATE RISK ALLOWED	B: LARGELY NATURAL	B: LARGELY NATURAL
A71J	NORTHERN PROVINCE	SAND	LOW	D: LARGE RISK ALLOWED	B: LARGELY NATURAL	A: UNMODIFIED, NATURAL
A71K	NORTHERN PROVINCE	SAND	MODERATE	C: MODERATE RISK ALLOWED	B: LARGELY NATURAL	B: LARGELY NATURAL
A71L	NORTHERN PROVINCE		LOW	D: LARGE RISK ALLOWED	B: LARGELY NATURAL	A: UNMODIFIED, NATURAL
A72A	NORTHERN PROVINCE	Brak	MODERATE	C: MODERATE RISK ALLOWED	D: LARGELY MODIFIED	C: MODERATELY MODIFIED
A72B	NORTHERN PROVINCE	BRAK	LOW	D: LARGE RISK ALLOWED	B: LARGELY NATURAL	B: LARGELY NATURAL
A80A	NORTHERN PROVINCE	Nzehele	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
A80B	NORTHERN PROVINCE	Nzehele	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED

QUAT.No.	PROVINCE	RIVERS	EISC	DEMC	PESC	BEST AEMC
A80C	NORTHERN PROVINCE	Nzehele	MODERATE	C: MODERATE RISK ALLOWED	D: LARGELY MODIFIED	C: MODERATELY MODIFIED
A80D	NORTHERN PROVINCE	Nzehele	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
A80E	NORTHERN PROVINCE	Nzehele	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
A80F	NORTHERN PROVINCE	Nzhele	HIGH	B: SMALL RISK ALLOWED	D: LARGELY MODIFIED	E - F: > E NOT ATTAINABLE IN 5 YR - USE D AS DEFAULT
A80G	NORTHERN PROVINCE	Nzhele	MODERATE	C: MODERATE RISK ALLOWED	D: LARGELY MODIFIED	E - F: > E NOT ATTAINABLE IN 5 YR - USE D AS DEFAULT
A80H	NORTHERN PROVINCE	Nzehele	MODERATE	C: MODERATE RISK ALLOWED	D: LARGELY MODIFIED	C: MODERATELY MODIFIED
A80J	NORTHERN PROVINCE	Nzhele	MODERATE	C: MODERATE RISK ALLOWED	D: LARGELY MODIFIED	E - F: > E NOT ATTAINABLE IN 5 YR - USE D AS DEFAULT
A91A	NORTHERN PROVINCE	upper trib Luvuvhu	MODERATE	C: MODERATE RISK ALLOWED	D: LARGELY MODIFIED	D: LARGELY MODIFIED
A91B	NORTHERN PROVINCE	upper trib luvuvhu	LOW	D: LARGE RISK ALLOWED	D: LARGELY MODIFIED	C: MODERATELY MODIFIED
A91C	NORTHERN PROVINCE	Luvuvhu	MODERATE	C: MODERATE RISK ALLOWED	D: LARGELY MODIFIED	C: MODERATELY MODIFIED
A91D	NORTHERN PROVINCE	Latonyanda	HIGH	B: SMALL RISK ALLOWED	D: LARGELY MODIFIED	C: MODERATELY MODIFIED
A91E	NORTHERN PROVINCE	Dzindi	HIGH	B: SMALL RISK ALLOWED	D: LARGELY MODIFIED	C: MODERATELY MODIFIED
A91F	NORTHERN PROVINCE	Luvuvhu (main stem)	HIGH	B: SMALL RISK ALLOWED	D: LARGELY MODIFIED	B: LARGELY NATURAL
A91G	NORTHERN PROVINCE	Mutshindudi	HIGH	B: SMALL RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL
A91H	NORTHERN PROVINCE	Luvuvhu (main stem)	HIGH	B: SMALL RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL
A91J	NORTHERN PROVINCE	Luvuvhu (main stem)	VERY HIGH	A: NO HUMAN HAZARDS	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
A91K	NORTHERN PROVINCE	Luvuvhu (main stem)	VERY HIGH	A: NO HUMAN HAZARDS	B: LARGELY NATURAL	B: LARGELY NATURAL
A92A	NORTHERN PROVINCE	Mutale (main stm)	HIGH	B: SMALL RISK ALLOWED	A: UNMODIFIED, NATURAL	A: UNMODIFIED, NATURAL
A92B	NORTHERN PROVINCE	Mutale (main stem)	HIGH	B: SMALL RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
A92C	NORTHERN PROVINCE	Mutale (main stem)	HIGH	B: SMALL RISK ALLOWED	B: LARGELY NATURAL	B: LARGELY NATURAL
A92D	NORTHERN PROVINCE	Mutale (main stem)	HIGH	B: SMALL RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED

Fig. 2: EISC, PESC & AEMC for A10A - A21J

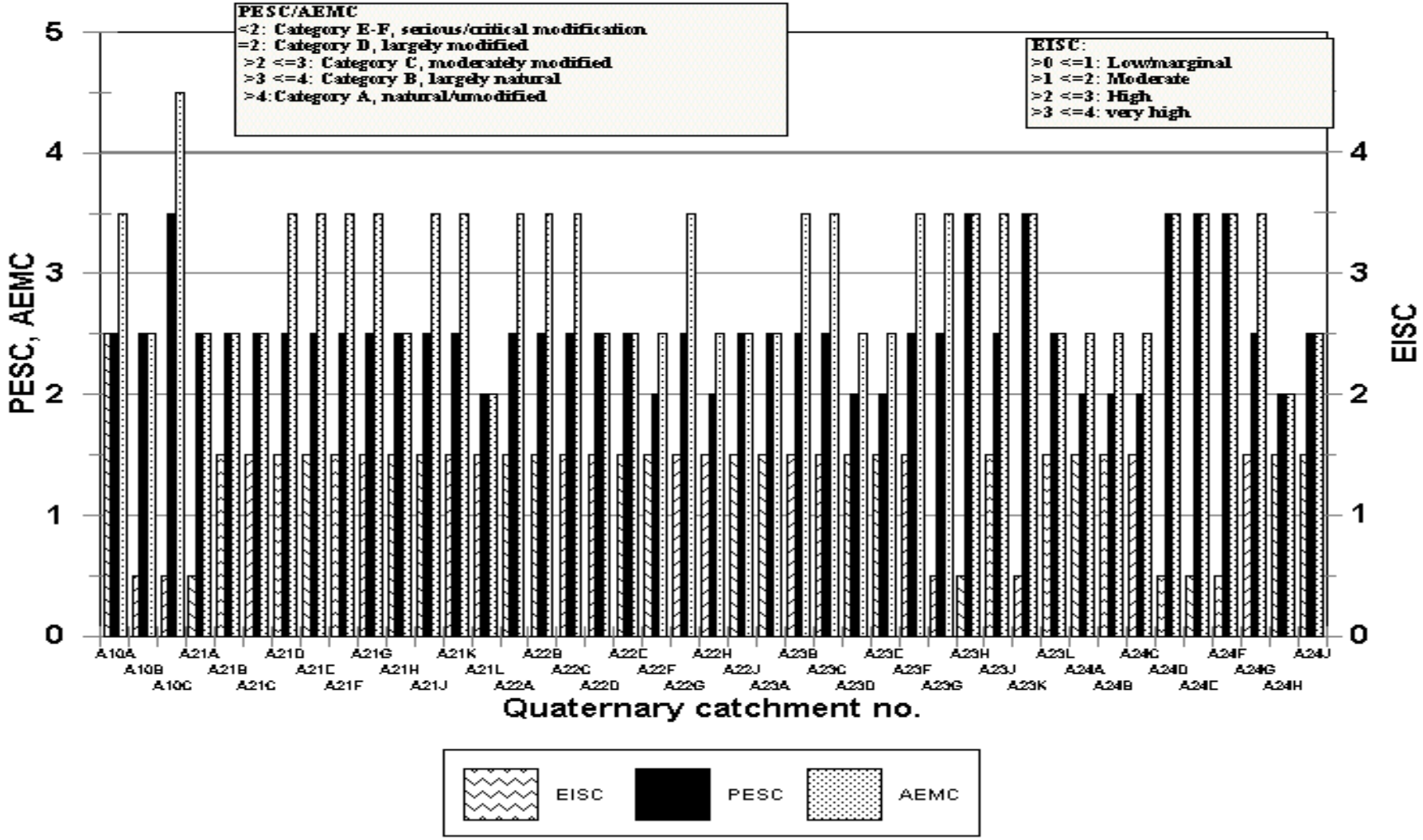


Fig. 3: EISC, PESC & AEMC for A31A - A61J

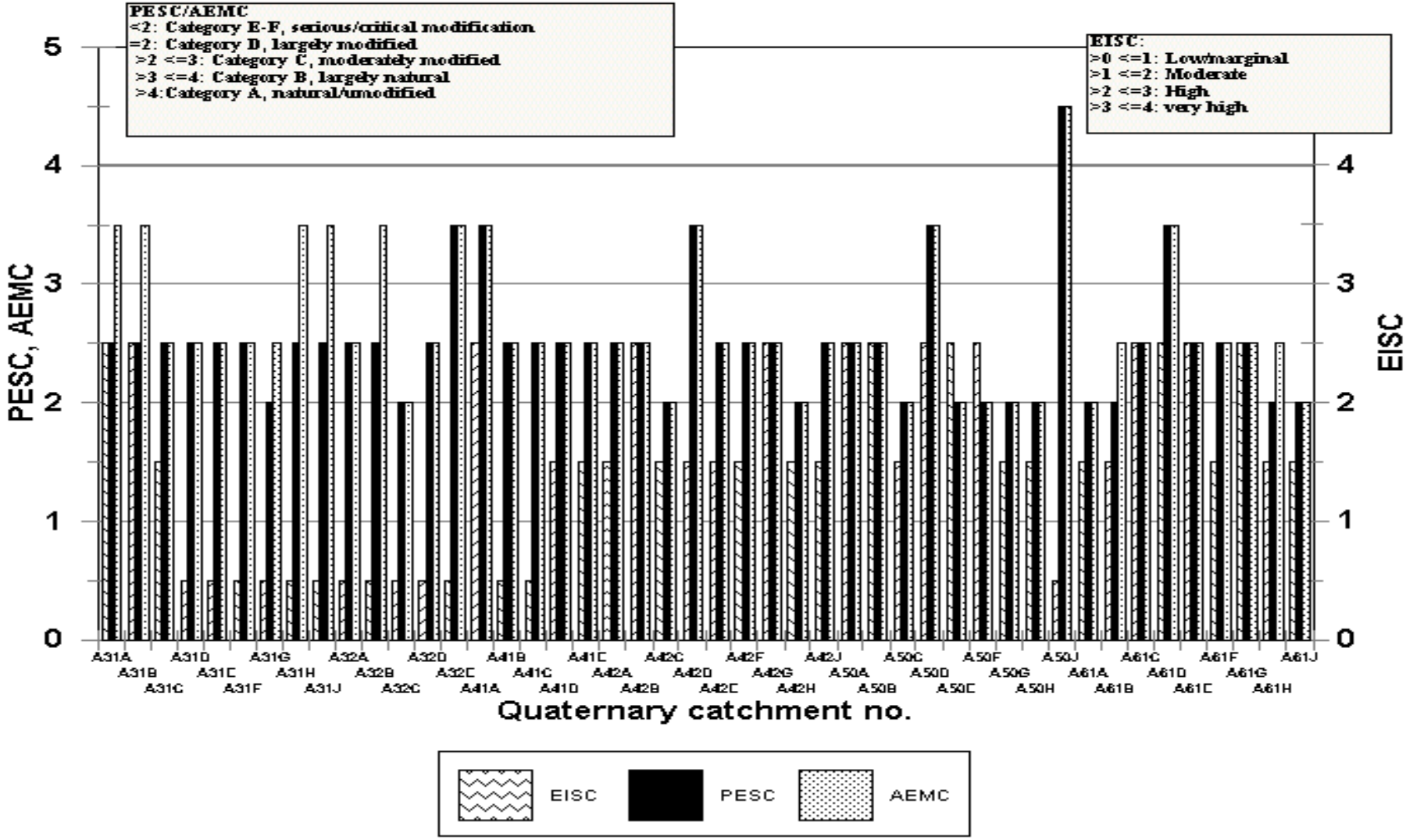


Fig.4: EISC, PESC & AEMC for A62A - A72B

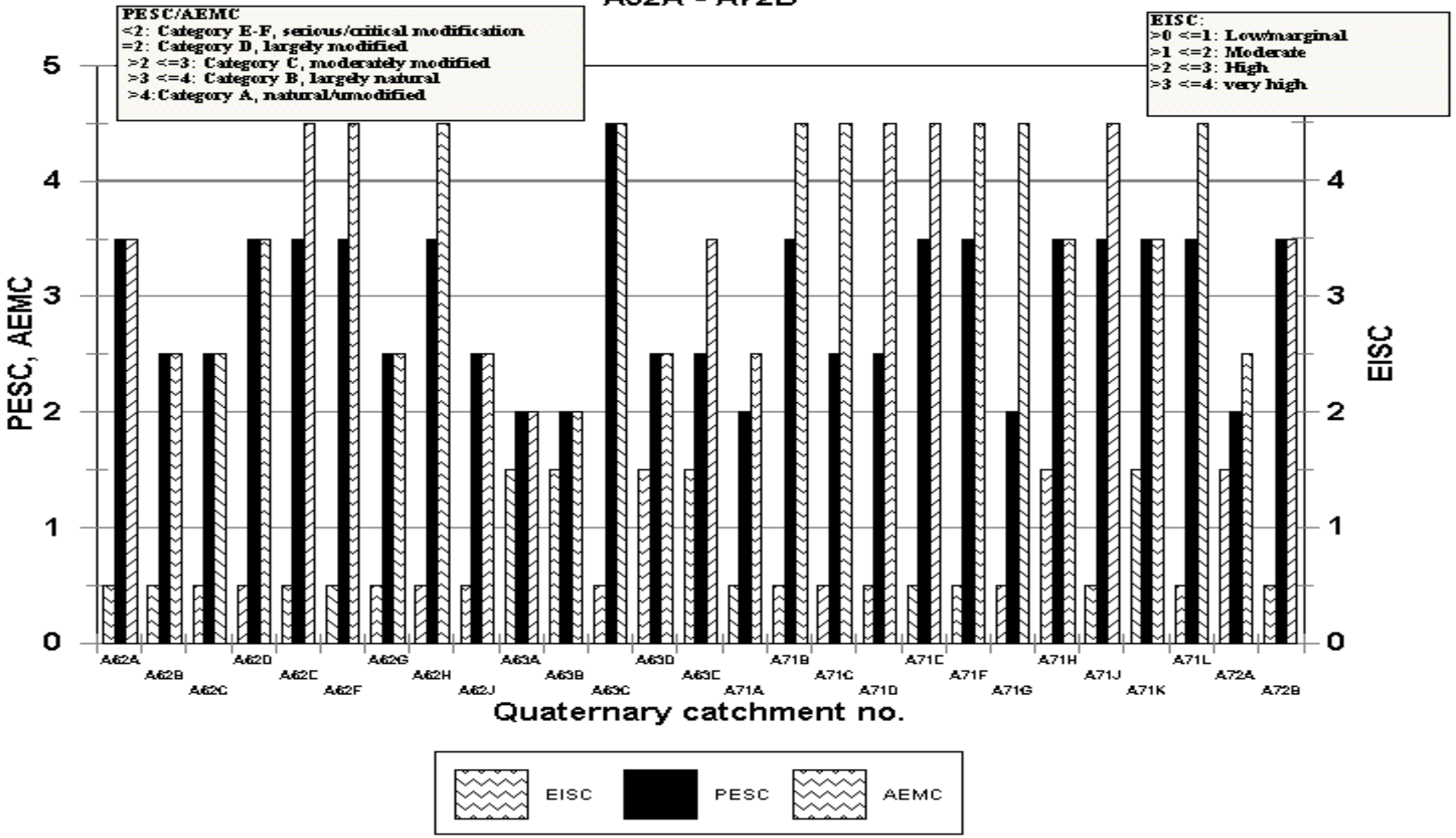


Fig.5: EISC, PESC & AEMC for A80A - A92D

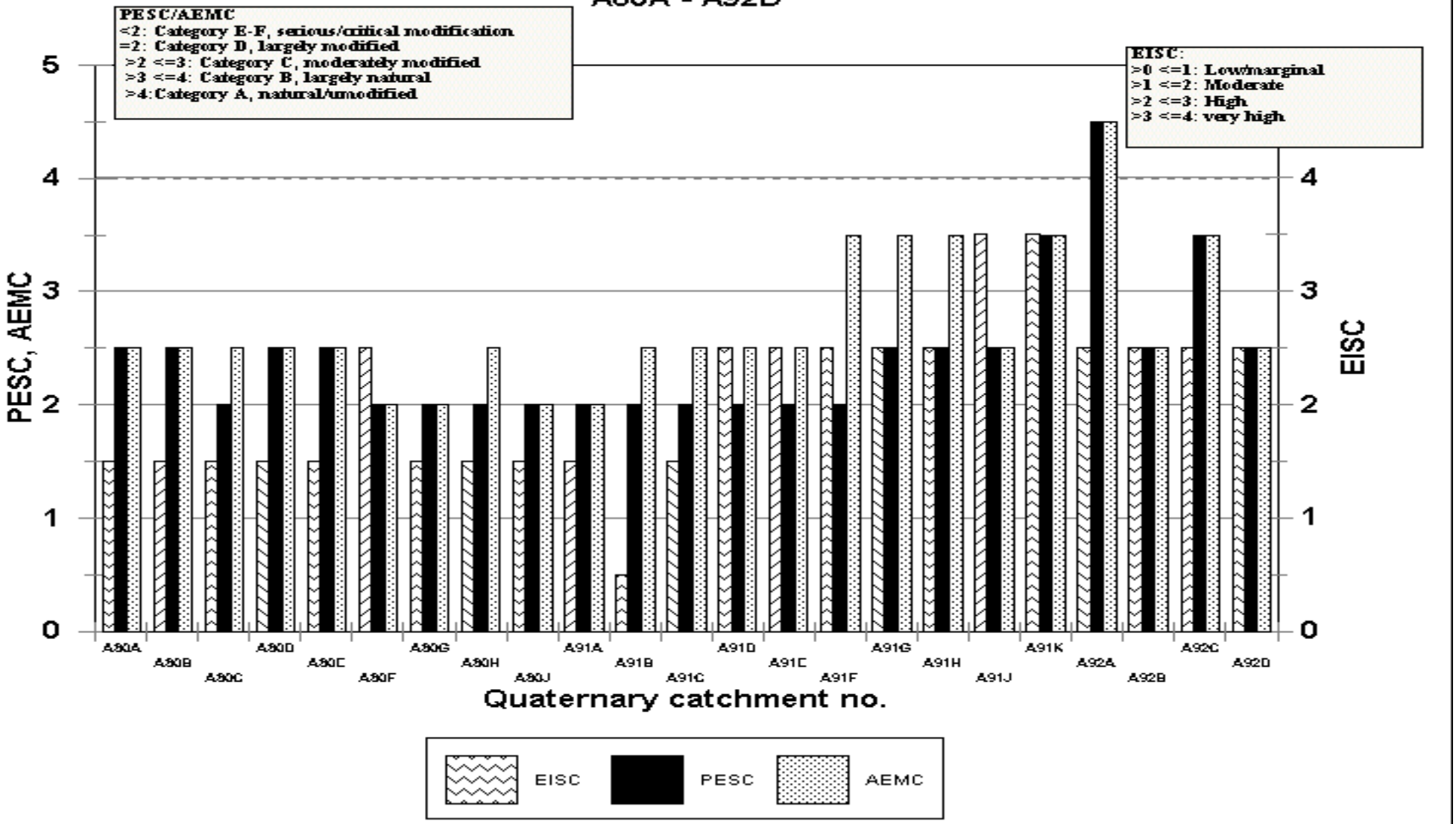


Table 2: Ratings for quaternary catchments of primary drainage B (Fig. 6 – 10).

QUAT.No.	PROVINCE	RIVERS	EISC	DEMC	PESC	BEST AEMC
B11A	NORTHERN PROVINCE	olifants	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL
B11B	NORTHERN PROVINCE	olifants	MODERATE	C: MODERATE RISK ALLOWED	D: LARGELY MODIFIED	C: MODERATELY MODIFIED
B11C	NORTHERN PROVINCE		LOW	D: LARGE RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL
B11D	NORTHERN PROVINCE		LOW	D: LARGE RISK ALLOWED	D: LARGELY MODIFIED	C: MODERATELY MODIFIED
B11E	NORTHERN PROVINCE		MODERATE	C: MODERATE RISK ALLOWED	D: LARGELY MODIFIED	C: MODERATELY MODIFIED
B11F	NORTHERN PROVINCE		LOW	D: LARGE RISK ALLOWED	D: LARGELY MODIFIED	C: MODERATELY MODIFIED
B11G	NORTHERN PROVINCE	Olifants	LOW	D: LARGE RISK ALLOWED	D: LARGELY MODIFIED	C: MODERATELY MODIFIED
B11H	NORTHERN PROVINCE	Spookspruit	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
B11J	NORTHERN PROVINCE	Olifants(Below Witbank dam)	HIGH	B: SMALL RISK ALLOWED	D: LARGELY MODIFIED	C: MODERATELY MODIFIED
B11K	NORTHERN PROVINCE	Klipspruit	MODERATE	C: MODERATE RISK ALLOWED	D: LARGELY MODIFIED	C: MODERATELY MODIFIED
B11L	NORTHERN PROVINCE	Olifants	HIGH	B: SMALL RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL
B12A	NORTHERN PROVINCE	Klein Olifants	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL
B12B	NORTHERN PROVINCE	Klein Olifants	MODERATE	C: MODERATE RISK ALLOWED	D: LARGELY MODIFIED	C: MODERATELY MODIFIED
B12C	NORTHERN PROVINCE	Klein Olifants	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
B12D	NORTHERN PROVINCE	Klein Olifants	MODERATE	C: MODERATE RISK ALLOWED	D: LARGELY MODIFIED	D: LARGELY MODIFIED
B12E	NORTHERN PROVINCE	Klein Olifants	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
B20A	NORTHERN PROVINCE	Bronkhorstspruit	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL
B20B	NORTHERN PROVINCE	Koffiespruit	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
B20C	NORTHERN PROVINCE	Ossspruit	LOW	D: LARGE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
B20D	NORTHERN PROVINCE	Bronkhorstspruit (below dam)	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
B20E	NORTHERN PROVINCE	Upper Wilge	MODERATE	C: MODERATE RISK ALLOWED	D: LARGELY MODIFIED	C: MODERATELY MODIFIED
B20F	NORTHERN PROVINCE	Upper Wilge	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
B20G	NORTHERN PROVINCE	Saalklapspruit	MODERATE	C: MODERATE RISK ALLOWED	D: LARGELY MODIFIED	C: MODERATELY MODIFIED

QUAT.No.	PROVINCE	RIVERS	EISC	DEMC	PESC	BEST AEMC
B20H	NORTHERN PROVINCE	Wilge (below Premier Mine Dam)	HIGH	B: SMALL RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
B20J	NORTHERN PROVINCE	Lower Wilge	HIGH	B: SMALL RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
B31A	GAUTENG	ELANDS	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL
B31B	GAUTENG	ELANDS	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL
B31C	NORTHERN PROVINCE	ELANDS	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL
B31D	NORTHERN PROVINCE	ELANDS	MODERATE	C: MODERATE RISK ALLOWED	D: LARGELY MODIFIED	D: LARGELY MODIFIED
B31E	NORTHERN PROVINCE	unnamed(thought to be dry sand bed stream)	LOW	D: LARGE RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL
B31F	MPUMALANGA	ELANDS	LOW	D: LARGE RISK ALLOWED	D: LARGELY MODIFIED	E - F: > E NOT ATTAINABLE IN 5 YR - USE D AS DEFAULT
B31G	MPUMALANGA	ELANDS	LOW	D: LARGE RISK ALLOWED	D: LARGELY MODIFIED	D: LARGELY MODIFIED
B31H	MPUMALANGA	ELANDS	MODERATE	C: MODERATE RISK ALLOWED	D: LARGELY MODIFIED	D: LARGELY MODIFIED
B31J	MPUMALANGA	ELANDS	MODERATE	C: MODERATE RISK ALLOWED	D: LARGELY MODIFIED	D: LARGELY MODIFIED
B32A	NORTHERN PROVINCE?	Olifants (upstream from Loskop)	HIGH	B: SMALL RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL
B32B	MPUMALANGA	SELONS	MODERATE	C: MODERATE RISK ALLOWED	D: LARGELY MODIFIED	D: LARGELY MODIFIED
B32C	MPUMALANGA	OLIFANTS	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
B32D	MPUMALANGA	OLIFANTS	HIGH	B: SMALL RISK ALLOWED	D: LARGELY MODIFIED	C: MODERATELY MODIFIED
B32E	MPUMALANGA	BLOED RIVER	LOW	D: LARGE RISK ALLOWED	B: LARGELY NATURAL	B: LARGELY NATURAL
B32F	MPUMALANGA	BLOED RIVER	LOW	D: LARGE RISK ALLOWED	D: LARGELY MODIFIED	D: LARGELY MODIFIED
B32G	MPUMALANGA	MOSES RIVER	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL
B32H	MPUMALANGA	MOSES	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL
B32J	MPUMALANGA	OLIFANTS	MODERATE	C: MODERATE RISK ALLOWED	D: LARGELY MODIFIED	C: MODERATELY MODIFIED
B41A	NORTHERN PROVINCE	Steelpoort	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL
B41B	NORTHERN PROVINCE	Steelpoort	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL
B41C	NORTHERN PROVINCE	Steelpoort	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL
B41D	NORTHERN PROVINCE	Steelpoort	MODERATE	C: MODERATE RISK ALLOWED	B: LARGELY NATURAL	B: LARGELY NATURAL
B41E	NORTHERN PROVINCE	Steelpoort	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
B41F	NORTHERN PROVINCE	Klip	VERY HIGH	A: NO HUMAN HAZARDS	B: LARGELY NATURAL	B: LARGELY NATURAL
B41G	NORTHERN PROVINCE	Dwars (upper portion)	HIGH	B: SMALL RISK ALLOWED	B: LARGELY NATURAL	B: LARGELY NATURAL
B41H	NORTHERN PROVINCE	Steelpoort	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
B41J	NORTHERN PROVINCE	Steelpoort	HIGH	B: SMALL RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
B41K	NORTHERN PROVINCE	Steelpoort (lower)	HIGH	B: SMALL RISK ALLOWED	D: LARGELY MODIFIED	C: MODERATELY MODIFIED

QUAT.No.	PROVINCE	RIVERS	EISC	DEMC	PESC	BEST AEMC
B42A	NORTHERN PROVINCE	Dorps river	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL
B42B	NORTHERN PROVINCE	Dorps	MODERATE	C: MODERATE RISK ALLOWED	D: LARGELY MODIFIED	C: MODERATELY MODIFIED
B42C	NORTHERN PROVINCE	Dorps	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
B42D	NORTHERN PROVINCE	Spekboom	MODERATE	C: MODERATE RISK ALLOWED	B: LARGELY NATURAL	B: LARGELY NATURAL
B42E	NORTHERN PROVINCE	Spekboom	HIGH	B: SMALL RISK ALLOWED	B: LARGELY NATURAL	B: LARGELY NATURAL
B42F	NORTHERN PROVINCE	Waterfalls	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL
B42G	NORTHERN PROVINCE	Waterfalls	HIGH	B: SMALL RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL
B42H	NORTHERN PROVINCE	Spekboom	HIGH	B: SMALL RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL
B51A	NORTHERN PROVINCE	Mossephiri	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
B51B	MPUMALANGA	OLIFANTS ARABIE DAM	MODERATE	C: MODERATE RISK ALLOWED	E - F: NOT AN ACCEPTABLE	E - F: > E NOT ATTAINABLE IN 5 YR - USE D AS DEFAULT
B51C	NORTHERN PROVINCE	Olifants main stem (below Arabie dam)	MODERATE	C: MODERATE RISK ALLOWED	D: LARGELY MODIFIED	E - F: > E NOT ATTAINABLE IN 5 YR - USE D AS DEFAULT
B51E	NORTHERN PROVINCE	No stream s- endorheic	INVALID ENTRIES	WRONG ENTRY	E - F: NOT AN ACCEPTABLE	E - F: > E NOT ATTAINABLE IN 5 YR - USE D AS DEFAULT
B51F	NORTHERN PROVINCE	Mkumpi	LOW	D: LARGE RISK ALLOWED	D: LARGELY MODIFIED	C: MODERATELY MODIFIED
B51G	NORTHERN PROVINCE	Olifants	MODERATE	C: MODERATE RISK ALLOWED	D: LARGELY MODIFIED	D: LARGELY MODIFIED
B51H	NORTHERN PROVINCE	No name seasonal stream	LOW	D: LARGE RISK ALLOWED	D: LARGELY MODIFIED	C: MODERATELY MODIFIED
B52A	NORTHERN PROVINCE	Olifants main stem	MODERATE	C: MODERATE RISK ALLOWED	D: LARGELY MODIFIED	D: LARGELY MODIFIED
B52B	NORTHERN PROVINCE	Lepellane	LOW	D: LARGE RISK ALLOWED	D: LARGELY MODIFIED	C: MODERATELY MODIFIED
B52C	NORTHERN PROVINCE	?	LOW	D: LARGE RISK ALLOWED	D: LARGELY MODIFIED	C: MODERATELY MODIFIED
B52D	NORTHERN PROVINCE	?	LOW	D: LARGE RISK ALLOWED	D: LARGELY MODIFIED	C: MODERATELY MODIFIED
B52E	NORTHERN PROVINCE	Olifants main stem	MODERATE	C: MODERATE RISK ALLOWED	D: LARGELY MODIFIED	D: LARGELY MODIFIED
B52F	NORTHERN PROVINCE		LOW	D: LARGE RISK ALLOWED	D: LARGELY MODIFIED	C: MODERATELY MODIFIED
B52G	NORTHERN PROVINCE	Olifants main stem	MODERATE	C: MODERATE RISK ALLOWED	D: LARGELY MODIFIED	D: LARGELY MODIFIED
B52H	NORTHERN PROVINCE	Klipspruit?	LOW	D: LARGE RISK ALLOWED	D: LARGELY MODIFIED	C: MODERATELY MODIFIED

QUAT.No.	PROVINCE	RIVERS	EISC	DEMC	PESC	BEST AEMC
B52J	NORTHERN PROVINCE	Olifants main stem	MODERATE	C: MODERATE RISK ALLOWED	D: LARGELY MODIFIED	D: LARGELY MODIFIED
B60A	MPUMALANGA	BLYDE	VERY HIGH	A: NO HUMAN HAZARDS	C: MODERATELY MODIFIED	B: LARGELY NATURAL
B60B	MPUMALANGA	BLYDE	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL
B60C	NORTHERN PROVINCE	Treur	VERY HIGH	A: NO HUMAN HAZARDS	A: UNMODIFIED, NATURAL	A: UNMODIFIED, NATURAL
B60D	MPUMALANGA	BLYDE	HIGH	B: SMALL RISK ALLOWED	B: LARGELY NATURAL	A: UNMODIFIED, NATURAL
B60E	MPUMALANGA	OHRIGSTAD	HIGH	B: SMALL RISK ALLOWED	B: LARGELY NATURAL	A: UNMODIFIED, NATURAL
B60F	MPUMALANGA	OHRIGSTAD	MODERATE	C: MODERATE RISK ALLOWED	D: LARGELY MODIFIED	D: LARGELY MODIFIED
B60G	MPUMALANGA	OHRIGSTAD	MODERATE	C: MODERATE RISK ALLOWED	D: LARGELY MODIFIED	D: LARGELY MODIFIED
B60H	MPUMALANGA	OHRIGSTAD	HIGH	B: SMALL RISK ALLOWED	D: LARGELY MODIFIED	D: LARGELY MODIFIED
B60J	NORTHERN PROVINCE	Blyde river (below dam)	HIGH	B: SMALL RISK ALLOWED	B: LARGELY NATURAL	B: LARGELY NATURAL
B71A	NORTHERN PROVINCE	Olifants (main stem)	MODERATE	C: MODERATE RISK ALLOWED	D: LARGELY MODIFIED	D: LARGELY MODIFIED
B71B	NORTHERN PROVINCE	Olifants (main stem)	MODERATE	C: MODERATE RISK ALLOWED	D: LARGELY MODIFIED	D: LARGELY MODIFIED
B71C	NORTHERN PROVINCE	Mohlapitse (Workberg area and Mafefe)	VERY HIGH	A: NO HUMAN HAZARDS	A: UNMODIFIED, NATURAL	A: UNMODIFIED, NATURAL
B71D	NORTHERN PROVINCE	Olifants	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
B71E	NORTHERN PROVINCE	Motse	LOW	D: LARGE RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL
B71F	NORTHERN PROVINCE	Olifants (main stem)	MODERATE	C: MODERATE RISK ALLOWED	D: LARGELY MODIFIED	D: LARGELY MODIFIED
B71G	NORTHERN PROVINCE		MODERATE	C: MODERATE RISK ALLOWED	D: LARGELY MODIFIED	D: LARGELY MODIFIED
B71H	NORTHERN PROVINCE	Olifants main stem	MODERATE	C: MODERATE RISK ALLOWED	D: LARGELY MODIFIED	D: LARGELY MODIFIED
B71J	NORTHERN PROVINCE	Olifants main stem (up from Blyde)	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
B72A	NORTHERN PROVINCE	Makutsi (upper reaches)	HIGH	B: SMALL RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
B72B	NORTHERN PROVINCE	Makutsi	LOW	D: LARGE RISK ALLOWED	D: LARGELY MODIFIED	D: LARGELY MODIFIED
B72C	NORTHERN PROVINCE	Olifants main stem (down from Blyde)	HIGH	B: SMALL RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
B72D	NORTHERN PROVINCE	Olifants main stem (down from Blyde)	HIGH	B: SMALL RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
B72E	NORTHERN PROVINCE	Ngwabatse	HIGH	B: SMALL RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
B72F	NORTHERN PROVINCE	Selati (upper)	VERY HIGH	A: NO HUMAN HAZARDS	A: UNMODIFIED, NATURAL	A: UNMODIFIED, NATURAL
B72G	NORTHERN PROVINCE	Selati (foothill zone)	HIGH	B: SMALL RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
B72H	NORTHERN PROVINCE	Selati	LOW	D: LARGE RISK ALLOWED	D: LARGELY MODIFIED	D: LARGELY MODIFIED

QUAT.No.	PROVINCE	RIVERS	EISC	DEMC	PESC	BEST AEMC
B72J	NORTHERN PROVINCE	Selati	LOW	D: LARGE RISK ALLOWED	D: LARGELY MODIFIED	D: LARGELY MODIFIED
B72K	NORTHERN PROVINCE	Selati (predom. seasonal reach, Upstream from PMC inflow)	MODERATE	C: MODERATE RISK ALLOWED	D: LARGELY MODIFIED	E - F: > E NOT ATTAINABLE IN 5 YR - USE D AS DEFAULT
B73A	NORTHERN PROVINCE	Klaserie	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
B73B	NORTHERN PROVINCE	Olifants main stem (belop Phb barrage)	HIGH	B: SMALL RISK ALLOWED	D: LARGELY MODIFIED	D: LARGELY MODIFIED
B73C	NORTHERN PROVINCE	Olifants main stem (inside KNP)	HIGH	B: SMALL RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
B73D	NORTHERN PROVINCE	Nhlaralumi	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL
B73E	NORTHERN PROVINCE	Timbavati	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL
B73F	NORTHERN PROVINCE	Timbavati	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL
B73G	NORTHERN PROVINCE	Olifants main stem (inside KNP)	HIGH	B: SMALL RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
B73H	NORTHERN PROVINCE	Olifants main stem (inside KNP)	HIGH	B: SMALL RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
B73J	NORTHERN PROVINCE	Olifants (KNP)	HIGH	B: SMALL RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL
B81A	NORTHERN PROVINCE	Broederstroom (upstream Ebenezer)	HIGH	B: SMALL RISK ALLOWED	D: LARGELY MODIFIED	C: MODERATELY MODIFIED
B81B	NORTHERN PROVINCE	Great Letaba	HIGH	B: SMALL RISK ALLOWED	D: LARGELY MODIFIED	B: LARGELY NATURAL
B81C	NORTHERN PROVINCE	Letsitele	MODERATE	C: MODERATE RISK ALLOWED	D: LARGELY MODIFIED	C: MODERATELY MODIFIED
B81D	NORTHERN PROVINCE	Thabina	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
B81E	NORTHERN PROVINCE	Letaba (downstream Tzaneen dam)	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
B81F	NORTHERN PROVINCE	Groot Letaba	MODERATE	C: MODERATE RISK ALLOWED	D: LARGELY MODIFIED	C: MODERATELY MODIFIED
B81G	NORTHERN PROVINCE	Molototsi	LOW	D: LARGE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
B81H	NORTHERN PROVINCE	Molototsi	LOW	D: LARGE RISK ALLOWED	D: LARGELY MODIFIED	D: LARGELY MODIFIED
B81J	NORTHERN PROVINCE	Great Letaba (before enters KNP)	HIGH	B: SMALL RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL
B82A	NORTHERN PROVINCE	Trib: Mid Letaba	LOW	D: LARGE RISK ALLOWED	D: LARGELY MODIFIED	E - F: > E NOT ATTAINABLE IN 5 YR - USE D AS DEFAULT
B82B	NORTHERN PROVINCE	Trib: Mid Letaba	LOW	D: LARGE RISK ALLOWED	D: LARGELY MODIFIED	E - F: > E NOT ATTAINABLE IN 5 YR - USE D AS DEFAULT
B82C	NORTHERN PROVINCE	Trib: Mid Letaba	LOW	D: LARGE RISK ALLOWED	D: LARGELY MODIFIED	E - F: > E NOT ATTAINABLE IN 5 YR - USE D AS DEFAULT

QUAT.No.	PROVINCE	RIVERS	EISC	DEMC	PESC	BEST AEMC
B82D	NORTHERN PROVINCE	Mid Letaba (up from dam)	MODERATE	C: MODERATE RISK ALLOWED	D: LARGELY MODIFIED	E - F: > E NOT ATTAINABLE IN 5 YR - USE D AS DEFAULT
B82E	NORTHERN PROVINCE	Klein Letaba	LOW	D: LARGE RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL
B82F	NORTHERN PROVINCE	Klein Letaba	LOW	D: LARGE RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL
B82G	NORTHERN PROVINCE	Klein Letaba	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
B82H	NORTHERN PROVINCE	Nsami	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
B82J	NORTHERN PROVINCE	Klein Letaba	HIGH	B: SMALL RISK ALLOWED	B: LARGELY NATURAL	B: LARGELY NATURAL
B83A	NORTHERN PROVINCE	Letaba (in KNP)	HIGH	B: SMALL RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL
B83B	NORTHERN PROVINCE	Tsende	MODERATE	C: MODERATE RISK ALLOWED	B: LARGELY NATURAL	B: LARGELY NATURAL
B83C	NORTHERN PROVINCE	Tsende	MODERATE	C: MODERATE RISK ALLOWED	B: LARGELY NATURAL	B: LARGELY NATURAL
B83D	NORTHERN PROVINCE	Letaba (below Engelhardt)	HIGH	B: SMALL RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
B83E	NORTHERN PROVINCE	Letaba (gorge)	HIGH	B: SMALL RISK ALLOWED	B: LARGELY NATURAL	B: LARGELY NATURAL
B90A	NORTHERN PROVINCE	Shisha	LOW	D: LARGE RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL
B90B	NORTHERN PROVINCE	Mphongolo	LOW	D: LARGE RISK ALLOWED	B: LARGELY NATURAL	B: LARGELY NATURAL
B90C	NORTHERN PROVINCE	Phungwane	LOW	D: LARGE RISK ALLOWED	B: LARGELY NATURAL	B: LARGELY NATURAL
B90D	NORTHERN PROVINCE	Phungwane	LOW	D: LARGE RISK ALLOWED	B: LARGELY NATURAL	B: LARGELY NATURAL
B90E	NORTHERN PROVINCE	? KNP	LOW	D: LARGE RISK ALLOWED	A: UNMODIFIED, NATURAL	A: UNMODIFIED, NATURAL
B90F	NORTHERN PROVINCE	Shingwedzi	MODERATE	C: MODERATE RISK ALLOWED	B: LARGELY NATURAL	B: LARGELY NATURAL
B90G	NORTHERN PROVINCE	Shingwedzi	MODERATE	C: MODERATE RISK ALLOWED	B: LARGELY NATURAL	B: LARGELY NATURAL
B90H	NORTHERN PROVINCE	Shigwedzi (KNP)	MODERATE	C: MODERATE RISK ALLOWED	A: UNMODIFIED, NATURAL	A: UNMODIFIED, NATURAL

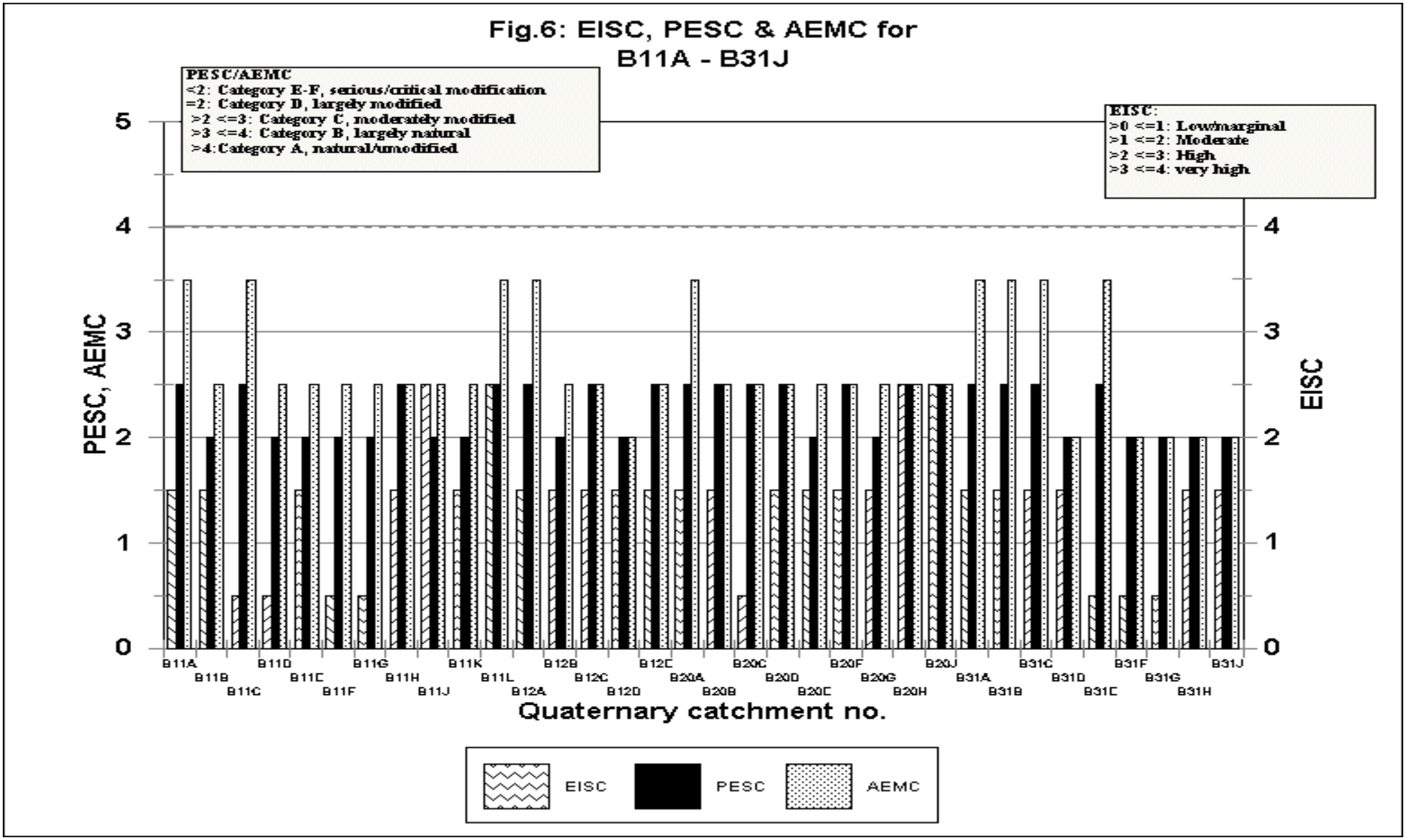


Fig.6: EISC, PESC & AEMC for
B11A - B31J
PESC/AEMC
<2: Category E-F, serious/critical modification
=2: Category D, largely modified
>2 <=3: Category C, moderately modified
>3 <=4: Category B, largely natural
>4:Category A, natural/unmodified
EISC:
>0 <=1: Low/marginal
>1 <=2: Moderate
>2 <=3: High
>3 <=4: very high
PESC, AEMC
EISC
0
1
2
3
4
5
B11A
B11B
B11C
B11D
B11C
B11F
B11G
B11H
B11J
B11K
B11L
B12A
B12B
B12C
B12D
B12C
B20A
B20B
B20C
B20D
B20C
B20F
B20G
B20H
B20J
B31A
B31B
B31C
B31D
B31C
B31F
B31G
B31H
B31J
Quaternary catchment no.
EISC
PESC
AEMC

Fig.7: EISC, PESC & AEMC for B32A - B52J

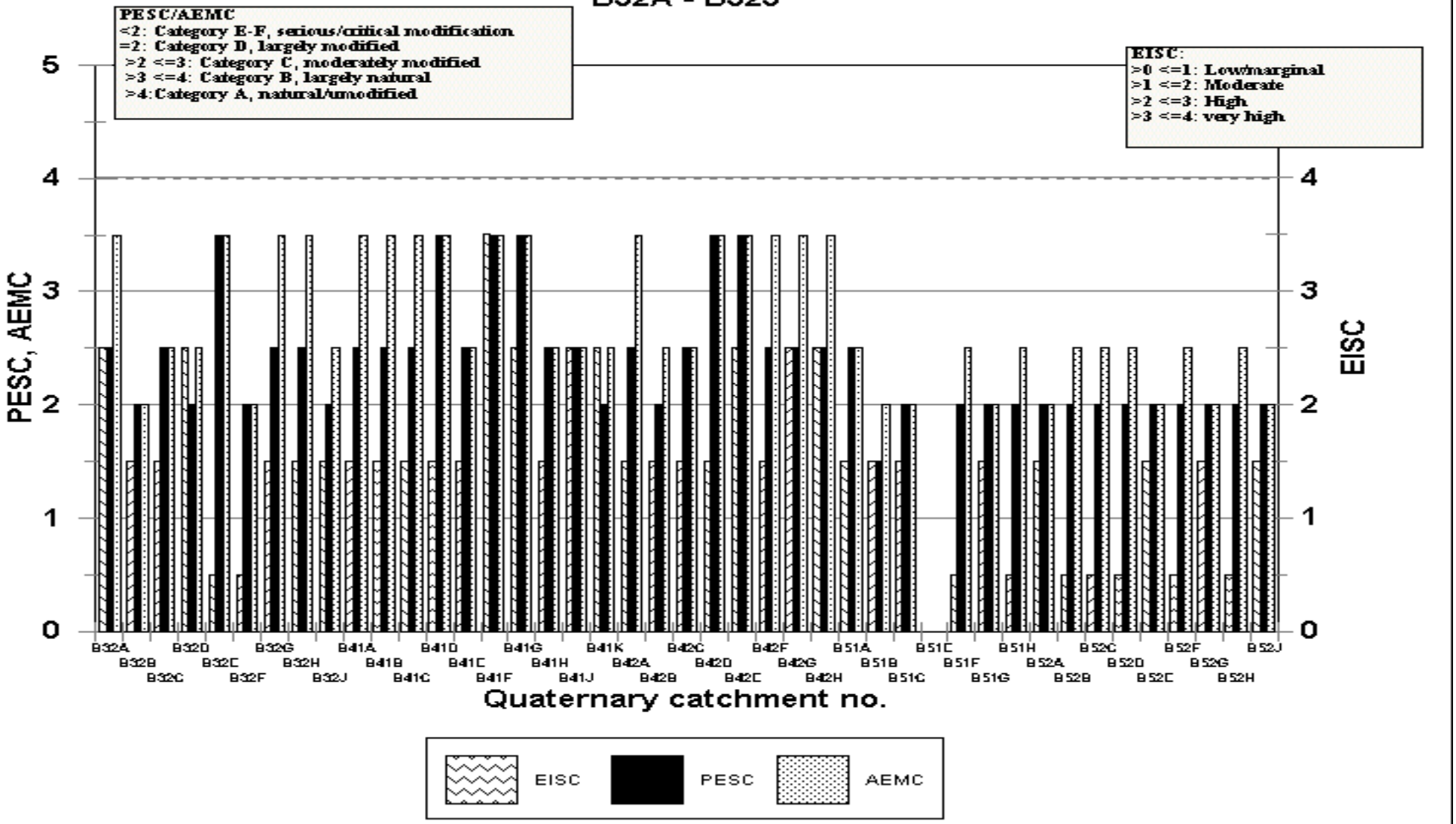
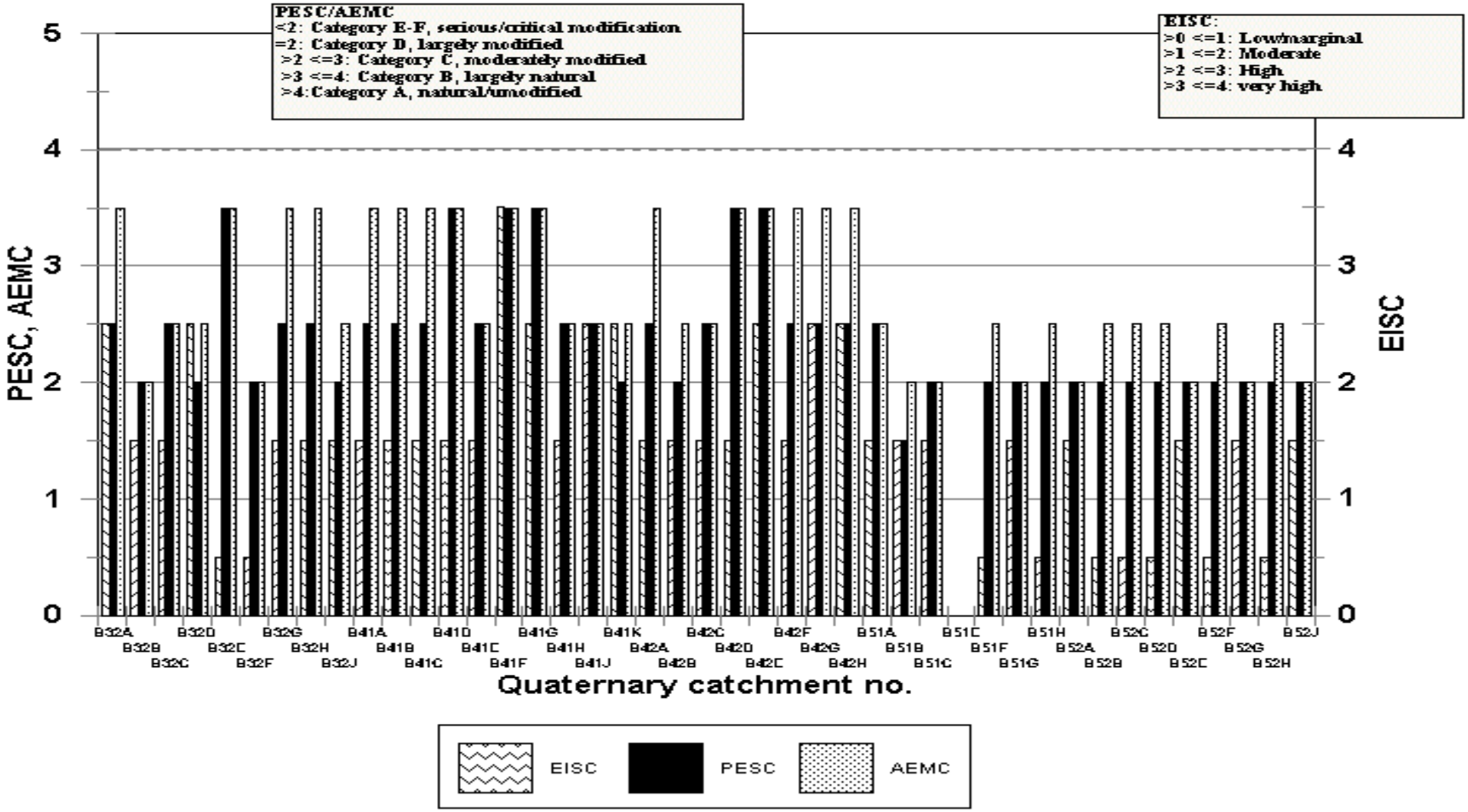


Fig. 8: EISC, PESC & AEMC for B32A - B52J



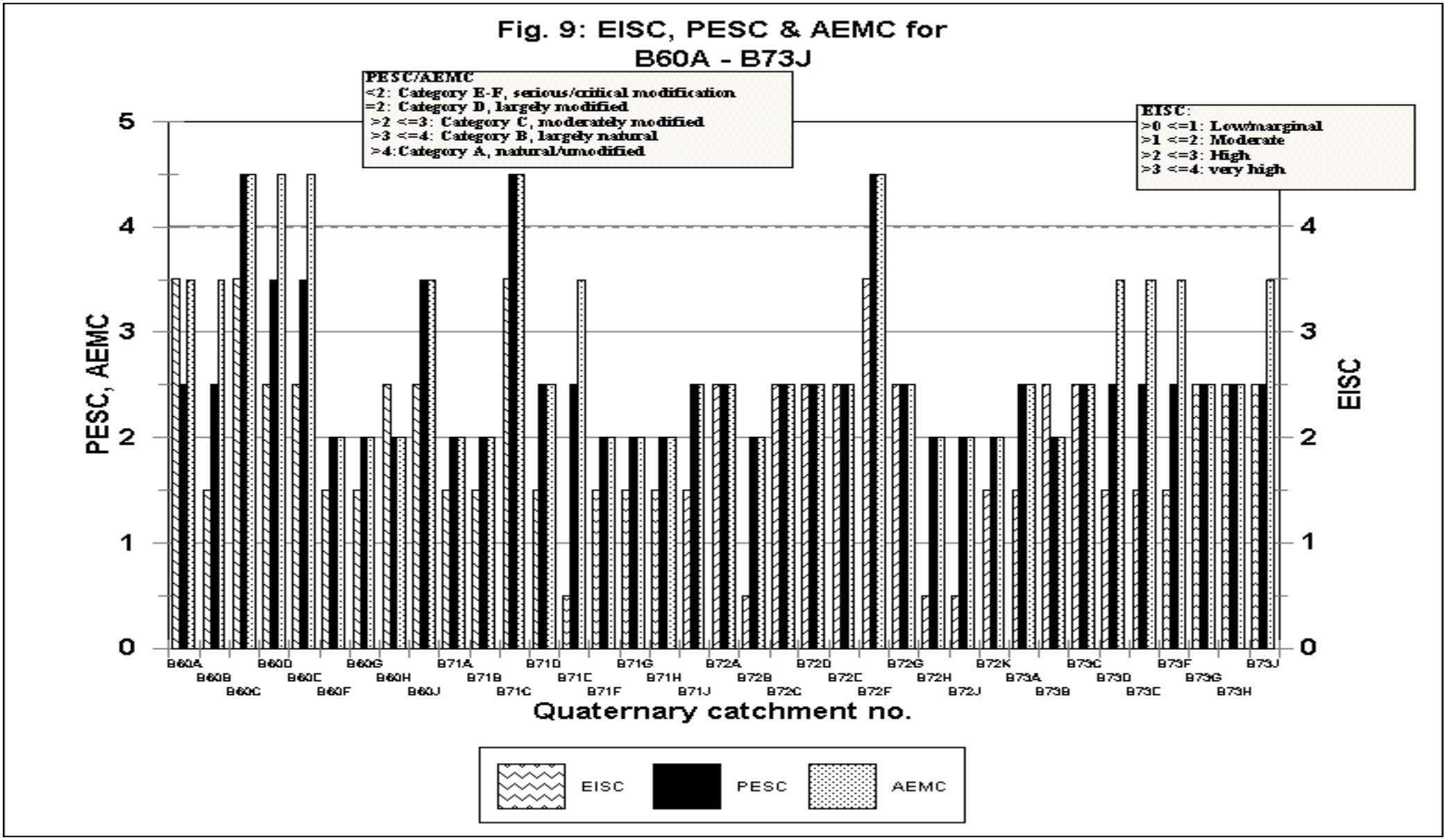


Fig. 9: EISC, PESC & AEMC for
B60A - B73J
PESC/AEMC
<2: Category E-F, serious/critical modification
=2: Category D, largely modified
>2 <=3: Category C, moderately modified
>3 <=4: Category B, largely natural
>4:Category A, natural/unmodified
EISC:
>0 <=1: Low/marginal
>1 <=2: Moderate
>2 <=3: High
>3 <=4: very high
PESC, AEMC
EISC
0
1
2
3
4
5
B60A
B60B
B60C
B60D
B60C
B60F
B60G
B60H
B60J
B71A
B71B
B71C
B71D
B71C
B71F
B71G
B71H
B71J
B72A
B72B
B72C
B72D
B72C
B72F
B72G
B72H
B72J
B72K
B73A
B73B
B73C
B73D
B73C
B73F
B73G
B73H
B73J
Quaternary catchment no.
EISC
PESC
AEMC

Fig.10: EISC, PESC & AEMC for B81A - B90H

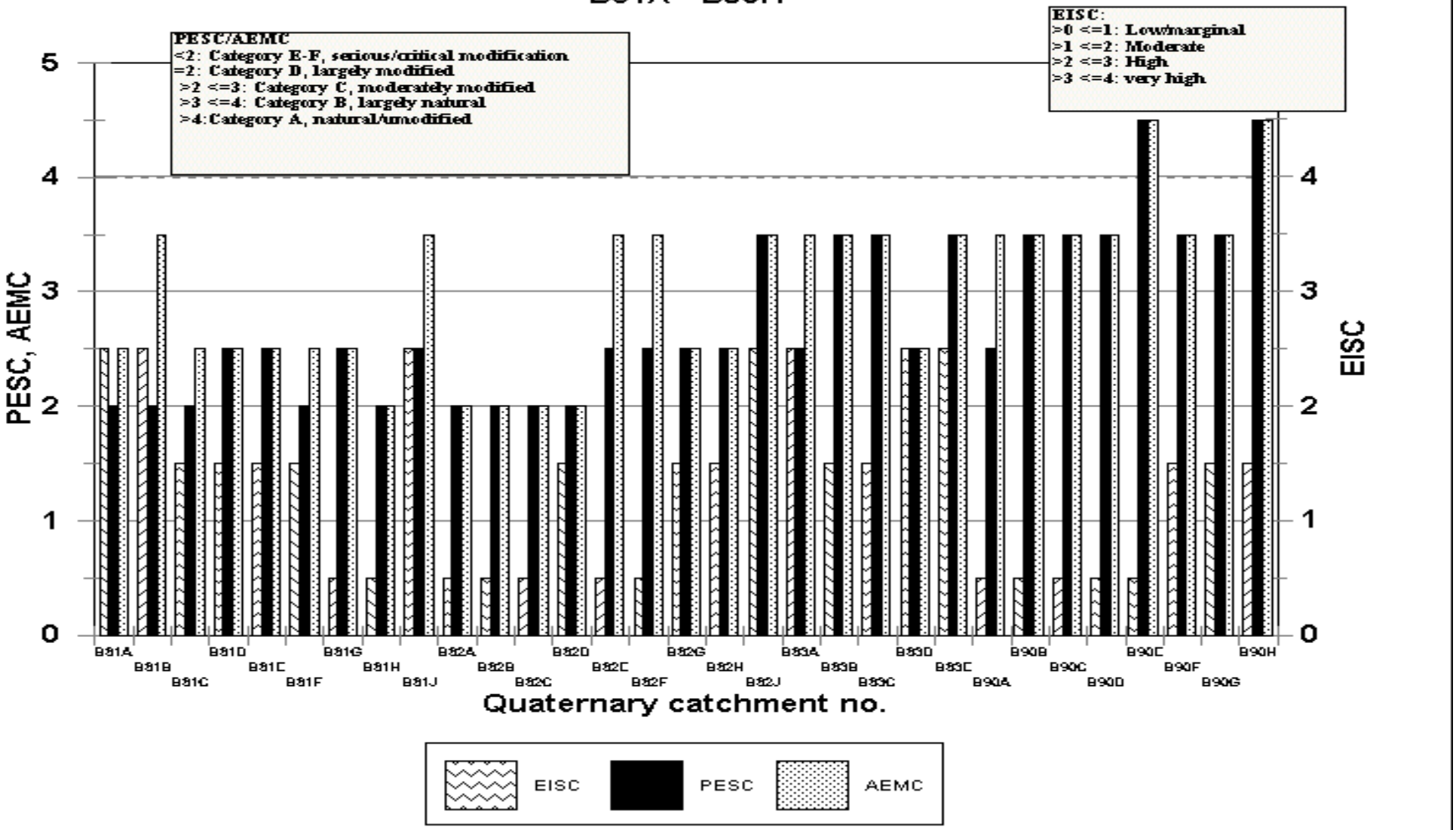


Table 3: Ratings for quaternary catchments of primary drainage C (Fig. 11 – 16).

QUAT.No.	PROVINCE	RIVERS	EISC	DEMC	PESC	BEST AEMC
C11A	MPUMALANGA	Vaal	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL
C11B	MPUMALANGA	Vaal	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL
C11C	MPUMALANGA	Klein Vaal	LOW	D: LARGE RISK ALLOWED	D: LARGELY MODIFIED	D: LARGELY MODIFIED
C11D	MPUMALANGA	Klein Vaal (Rietspruit)	LOW	D: LARGE RISK ALLOWED	D: LARGELY MODIFIED	C: MODERATELY MODIFIED
C11E	MPUMALANGA	Rietspruit	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL
C11F	MPUMALANGA	Kaffirspruit (after confluence with Kleinkaffirspruit and Brakspruit)	LOW	D: LARGE RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL
C11G	MPUMALANGA	Kaffirspruit	LOW	D: LARGE RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL
C11H	MPUMALANGA	Blesbokspruit (Knopkieriesspruit?)	LOW	D: LARGE RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL
C11J	MPUMALANGA	Vaal	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL
C11K	MPUMALANGA		MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL
C11L	MPUMALANGA	Grootdraai dam	MODERATE	C: MODERATE RISK ALLOWED	E - F: NOT AN ACCEPTABLE	E - F: > E NOT ATTAINABLE IN 5 YR - USE D AS DEFAULT
C11M	MPUMALANGA	Vaal (downstream from Crootdraai)	MODERATE	C: MODERATE RISK ALLOWED	D: LARGELY MODIFIED	D: LARGELY MODIFIED
C12A	GAUTENG	Ventersspruit	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
C12B	GAUTENG	Vaal (main)	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
C12C	GAUTENG	Vaal (main)	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
C12D	MPUMALANGA	Waterval (Kleinspruit)	MODERATE	C: MODERATE RISK ALLOWED	D: LARGELY MODIFIED	D: LARGELY MODIFIED
C12E	MPUMALANGA	Rietspruit	LOW	D: LARGE RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL
C12F	MPUMALANGA	Waterval (Kleinspruit)	MODERATE	C: MODERATE RISK ALLOWED	D: LARGELY MODIFIED	C: MODERATELY MODIFIED
C12G	MPUMALANGA	Waterval (Kleinspruit)	MODERATE	C: MODERATE RISK ALLOWED	D: LARGELY MODIFIED	D: LARGELY MODIFIED
C12H	GAUTENG	Vaal (main)	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
C12J	MPUMALANGA	Unamed trib.	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
C12K	MPUMALANGA	Molspruit	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
C12L	GAUTENG	Vaal (Vaal dam backwater portion)	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
C13A	FREE STATE	Sandspruit	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL
C13B	FREE STATE	Sandspruit	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL
C13C	FREE STATE	Seekoevlei	HIGH	B: SMALL RISK ALLOWED	B: LARGELY NATURAL	B: LARGELY NATURAL
C13D	FREE STATE	Klip (after confluence with Modderspruit/Gansvleispruit system)	HIGH	B: SMALL RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL
C13E	FREE STATE	Komandospruit	HIGH	B: SMALL RISK ALLOWED	B: LARGELY NATURAL	B: LARGELY NATURAL
C13F	FREE STATE	Klip (after confluence with Komandospruit)	HIGH	B: SMALL RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL
C13G	FREE STATE	Spruitsonderdrif	HIGH	B: SMALL RISK ALLOWED	B: LARGELY NATURAL	B: LARGELY NATURAL
C13H	FREE STATE	Klip (after confluence with Spruitsonderdrif)	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL
C21A	GAUTENG	Suikerbosrand	MODERATE	C: MODERATE RISK ALLOWED	D: LARGELY MODIFIED	D: LARGELY MODIFIED
C21B	GAUTENG	Suikerbosrand	HIGH	B: SMALL RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL
C21C	GAUTENG	Suikerbosrand	MODERATE	C: MODERATE RISK ALLOWED	D: LARGELY MODIFIED	D: LARGELY MODIFIED

QUAT.No.	PROVINCE	RIVERS	EISC	DEMC	PESC	BEST AEMC
C21D	GAUTENG	Blesbokspruit	MODERATE	C: MODERATE RISK ALLOWED	D: LARGELY MODIFIED	C: MODERATELY MODIFIED
C21E	GAUTENG	Blesbokspruit	HIGH	B: SMALL RISK ALLOWED	D: LARGELY MODIFIED	C: MODERATELY MODIFIED
C21F	GAUTENG	Blesbokspruit (downstream from Heidelberg)	HIGH	B: SMALL RISK ALLOWED	D: LARGELY MODIFIED	C: MODERATELY MODIFIED
C21G	GAUTENG	Suikerbosrand	MODERATE	C: MODERATE RISK ALLOWED	D: LARGELY MODIFIED	D: LARGELY MODIFIED
C22A	GAUTENG	(below confluence point)-Klipriver?	MODERATE	C: MODERATE RISK ALLOWED	E - F: NOT AN ACCEPTABLE	D: LARGELY MODIFIED
C22B	GAUTENG	Natalspruit	LOW	D: LARGE RISK ALLOWED	E - F: NOT AN ACCEPTABLE	D: LARGELY MODIFIED
C22C	GAUTENG	Rietspruit (after confluence with Natalspruit)	LOW	D: LARGE RISK ALLOWED	E - F: NOT AN ACCEPTABLE	D: LARGELY MODIFIED
C22D	GAUTENG	Klip	MODERATE	C: MODERATE RISK ALLOWED	D: LARGELY MODIFIED	E - F: > E NOT ATTAINABLE IN 5 YR - USE D AS DEFAULT
C22E	GAUTENG	Klip	HIGH	B: SMALL RISK ALLOWED	E - F: NOT AN ACCEPTABLE	D: LARGELY MODIFIED
C22F	GAUTENG	Vaal (downstream from Vaal dam)	HIGH	B: SMALL RISK ALLOWED	D: LARGELY MODIFIED	D: LARGELY MODIFIED
C22G	GAUTENG	Taaibosspruit (FOR PESC, TAKE C83L)	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
C22H	GAUTENG	Rietspruit?? (before confluence with Vaal)= C22C	MODERATE	C: MODERATE RISK ALLOWED	D: LARGELY MODIFIED	D: LARGELY MODIFIED
C22J	GAUTENG	Leeuspruit	MODERATE	C: MODERATE RISK ALLOWED	D: LARGELY MODIFIED	D: LARGELY MODIFIED
C22K	GAUTENG	Vaal (Barrage portion)	MODERATE	C: MODERATE RISK ALLOWED	D: LARGELY MODIFIED	D: LARGELY MODIFIED
C23A	GAUTENG	Vaal	MODERATE	C: MODERATE RISK ALLOWED	D: LARGELY MODIFIED	D: LARGELY MODIFIED
C23B	GAUTENG	Vaal	MODERATE	C: MODERATE RISK ALLOWED	D: LARGELY MODIFIED	D: LARGELY MODIFIED
C23C	GAUTENG	Vaal (Parys)	HIGH	B: SMALL RISK ALLOWED	D: LARGELY MODIFIED	D: LARGELY MODIFIED
C23D	NORTH WEST	Mooirivierloop??	HIGH	B: SMALL RISK ALLOWED	D: LARGELY MODIFIED	C: MODERATELY MODIFIED
C23E	NORTH WEST	Mooirivierloop	HIGH	B: SMALL RISK ALLOWED	D: LARGELY MODIFIED	C: MODERATELY MODIFIED
C23F	NORTH WEST	Skoonspruit main stem	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL
C23G	NORTH WEST	Mooi (upstream from Boskop)	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL
C23H	NORTH WEST	Mooi (just before confluence with Loopspruit)	MODERATE	C: MODERATE RISK ALLOWED	D: LARGELY MODIFIED	C: MODERATELY MODIFIED
C23J	NORTH WEST	Loopspruit (above Klipdrif dam)	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL
C23K	NORTH WEST	Loopspruit	MODERATE	C: MODERATE RISK ALLOWED	D: LARGELY MODIFIED	B: LARGELY NATURAL
C23L	GAUTENG	Vaal (downstream from Parys)	MODERATE	C: MODERATE RISK ALLOWED	D: LARGELY MODIFIED	D: LARGELY MODIFIED
C24A	NORTH WEST	Mooirivier/Brakspruit system	HIGH	B: SMALL RISK ALLOWED	D: LARGELY MODIFIED	C: MODERATELY MODIFIED
C24B	GAUTENG	Vaal (main)	MODERATE	C: MODERATE RISK ALLOWED	D: LARGELY MODIFIED	D: LARGELY MODIFIED
C24C	NORTHERN CAPE	Dry Harts (and tributaries)	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL
C24D	NORTHERN CAPE	Skoonspruit (downstream from Ventersdorp)	HIGH	B: SMALL RISK ALLOWED	D: LARGELY MODIFIED	B: LARGELY NATURAL

QUAT.No.	PROVINCE	RIVERS	EISC	DEMC	PESC	BEST AEMC
C24E	NORTH WEST	Skoonspruit main stem	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL
C24F	NORTH WEST	Taaibosspruit??	HIGH	B: SMALL RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL
C24G	NORTH WEST	Skoonspruit (upstream from farm dam)	MODERATE	C: MODERATE RISK ALLOWED	B: LARGELY NATURAL	B: LARGELY NATURAL
C24H	NORTH WEST	Skoonspruit (after confluence with Jagerspruit)	MODERATE	C: MODERATE RISK ALLOWED	D: LARGELY MODIFIED	C: MODERATELY MODIFIED
C24J	NORTH WEST	Vaal (from Okney to confluence with Vals)	MODERATE	C: MODERATE RISK ALLOWED	D: LARGELY MODIFIED	D: LARGELY MODIFIED
C25A	FREE STATE	Klipspruit?	HIGH	B: SMALL RISK ALLOWED	B: LARGELY NATURAL	B: LARGELY NATURAL
C25B	GAUTENG	Sandspruit	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
C25C	GAUTENG	Vaal (up to Bloemhof)	MODERATE	C: MODERATE RISK ALLOWED	D: LARGELY MODIFIED	D: LARGELY MODIFIED
C25D	FREE STATE	Makwasiesspruit	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
C25E	FREE STATE	Bamboesspruit	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
C25F	GAUTENG	Bloemhof dam (entire quatenary inundated)	MODERATE	C: MODERATE RISK ALLOWED	E - F: NOT AN ACCEPTABLE	E - F: > E NOT ATTAINABLE IN 5 YR - USE D AS DEFAULT
C31A	NORTHERN CAPE	Harts	MODERATE	C: MODERATE RISK ALLOWED	D: LARGELY MODIFIED	C: MODERATELY MODIFIED
C31B	NORTHERN CAPE	Harts	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL
C31C	NORTHERN CAPE	Harts	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL
C31D	NORTHERN CAPE	Harts (portion upstream from Barberspan dam)	HIGH	B: SMALL RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL
C31E	NORTHERN CAPE	Harts	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL
C31F	NORTHERN CAPE	Harts	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL
C32A	NORTHERN CAPE	Dry Harts (and tributaries)	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL
C32B	NORTHERN CAPE	Dry Harts (and tributaries)	MODERATE	C: MODERATE RISK ALLOWED	D: LARGELY MODIFIED	C: MODERATELY MODIFIED
C32C	NORTHERN CAPE	Dry Harts (and tributaries)	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL
C32D	NORTHERN CAPE	Dry Harts (and tributaries)	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL
C33A	NORTHERN CAPE	Harts	MODERATE	C: MODERATE RISK ALLOWED	D: LARGELY MODIFIED	B: LARGELY NATURAL
C33B	NORTHERN CAPE	Harts (portion upstream of Spitskop dam)	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL
C33C	NORTHERN CAPE	Harts	MODERATE	C: MODERATE RISK ALLOWED	D: LARGELY MODIFIED	B: LARGELY NATURAL
C41A	FREE STATE	Upper Sand (upstream of dams)	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL
C41B	FREE STATE	Upper Sand (upstream of dams)	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL
C41C	FREE STATE	Upper Sand (upstream of dams)	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL
C41D	FREE STATE	Upper Sand (upstream of dams)	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL
C41E	FREE STATE	Erfenis Dam	INVALID ENTRIES	WRONG ENTRY	E - F: NOT AN ACCEPTABLE	E - F: > E NOT ATTAINABLE IN 5 YR - USE D AS DEFAULT
C41F	FREE STATE	Trib	LOW	D: LARGE RISK ALLOWED	B: LARGELY NATURAL	B: LARGELY NATURAL
C41G	FREE STATE	Vet (before confluence with Sand)	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED

QUAT.No.	PROVINCE	RIVERS	EISC	DEMC	PESC	BEST AEMC
C41H	FREE STATE	Vet (before confluence with Sand)	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
C41J	FREE STATE	Vet (before confluence with Sand)	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
C42A	FREE STATE	Upper Sand (upstream of dams)	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL
C42B	FREE STATE	Upper Sand (upstream of dams)	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL
C42C	FREE STATE	Upper Sand (upstream of dams)	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL
C42D	FREE STATE	Upper Sand (upstream of dams)	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL
C42E	FREE STATE	Upper Sand (upstream of Allemanskraal Dam)	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL
C42F	FREE STATE	Trib. of Sand	MODERATE	C: MODERATE RISK ALLOWED	D: LARGELY MODIFIED	D: LARGELY MODIFIED
C42G	FREE STATE	Sand?? (after confluence with main channel sand)	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
C42H	FREE STATE	Trib. of Sand	MODERATE	C: MODERATE RISK ALLOWED	D: LARGELY MODIFIED	D: LARGELY MODIFIED
C42J	FREE STATE	Sand	MODERATE	C: MODERATE RISK ALLOWED	D: LARGELY MODIFIED	D: LARGELY MODIFIED
C42K	FREE STATE	Main channel Sand	MODERATE	C: MODERATE RISK ALLOWED	D: LARGELY MODIFIED	C: MODERATELY MODIFIED
C42L	FREE STATE	Sand	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
C43A	FREE STATE	Sand	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
C43B	FREE STATE	Endoreic region	INVALID ENTRIES	WRONG ENTRY	E - F: NOT AN ACCEPTABLE	E - F: > E NOT ATTAINABLE IN 5 YR - USE D AS DEFAULT
C43C	FREE STATE	Vet	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
C43D	FREE STATE	Vet	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
C51A	FREE STATE	Fouriespruit	HIGH	B: SMALL RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL
C51B	FREE STATE	Riet	HIGH	B: SMALL RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL
C51C	FREE STATE	Riet	HIGH	B: SMALL RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL
C51D	FREE STATE	Riet	HIGH	B: SMALL RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL
C51E	FREE STATE	Riet	HIGH	B: SMALL RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
C51F	FREE STATE	Riet	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
C51G	FREE STATE	Riet	HIGH	B: SMALL RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL
C51H	FREE STATE	Riet	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL
C51J	FREE STATE	Riet (upstream portion of Kalkfontein dam)	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL
C51K	FREE STATE	Riet	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
C51L	FREE STATE	Riet	MODERATE	C: MODERATE RISK ALLOWED	D: LARGELY MODIFIED	C: MODERATELY MODIFIED
C51M	FREE STATE	Riet	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
C52A	FREE STATE	Modder (upstream from Rusfontein dam)	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL
C52B	FREE STATE	Modder	MODERATE	C: MODERATE RISK ALLOWED	D: LARGELY MODIFIED	C: MODERATELY MODIFIED
C52C	FREE STATE	Trib	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL
C52D	FREE STATE	Modder	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
C52E	FREE STATE	Modder (esentially dam area-mockes and Maselspoort)	MODERATE	C: MODERATE RISK ALLOWED	E - F: NOT AN ACCEPTABLE	E - F: NOT AN ACCEPTABLE

QUAT.No.	PROVINCE	RIVERS	EISC	DEMC	PESC	BEST AEMC
C52F	FREE STATE	Renoster (upstream from Bloemspruit confluence and informal settlement)	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL
C52G	FREE STATE	Modder (after confluence, before Krugerdrif dam)	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL
C52H	FREE STATE	Modder	MODERATE	C: MODERATE RISK ALLOWED	E - F: NOT AN ACCEPTABLE	D: LARGELY MODIFIED
C52J	FREE STATE	Modder trib.	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
C52K	FREE STATE	Modder	MODERATE	C: MODERATE RISK ALLOWED	E - F: NOT AN ACCEPTABLE	D: LARGELY MODIFIED
C52L	FREE STATE	Modder	MODERATE	C: MODERATE RISK ALLOWED	E - F: NOT AN ACCEPTABLE	D: LARGELY MODIFIED
C60A	FREE STATE	Upper Sand (upstream of dams)	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL
C60B	FREE STATE	Upper Sand (upstream of dams)	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL
C60C	FREE STATE	Upper Sand (upstream of dams)	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL
C60D	FREE STATE	Vals	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
C60E	FREE STATE	Upper Sand (upstream of dams)	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL
C60F	FREE STATE	Trib	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
C60G	FREE STATE	Vals	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
C60H	FREE STATE	Trib. of Vals	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
C60J	FREE STATE	Vals	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
C70A	FREE STATE	Renoster system	MODERATE	C: MODERATE RISK ALLOWED	B: LARGELY NATURAL	B: LARGELY NATURAL
C70B	FREE STATE	Renoster system	MODERATE	C: MODERATE RISK ALLOWED	B: LARGELY NATURAL	B: LARGELY NATURAL
C70C	FREE STATE	Renoster system (upstream from Koppies dam)	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
C70D	FREE STATE	Renoster system (downstream from Koppies dam)	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
C70E	FREE STATE	Renoster system	MODERATE	C: MODERATE RISK ALLOWED	B: LARGELY NATURAL	B: LARGELY NATURAL
C70F	FREE STATE	Renoster system (downstream from Koppies dam)	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
C70G	FREE STATE	Renoster system	MODERATE	C: MODERATE RISK ALLOWED	B: LARGELY NATURAL	B: LARGELY NATURAL
C70H	FREE STATE	Renoster system	MODERATE	C: MODERATE RISK ALLOWED	B: LARGELY NATURAL	B: LARGELY NATURAL
C70J	FREE STATE	Renoster system (downstream from Koppies dam)	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
C70K	FREE STATE	Renoster system (downstream from Koppies dam)	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
C81A	FREE STATE	Wilge (main stem)	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
C81B	FREE STATE	Wilge (main stem)	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
C81C	FREE STATE	Nuwejaarsspruit (Wilge trib.)	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
C81D	FREE STATE	Sterkfontein Dam	INVALID	WRONG ENTRY	E - F: NOT AN ACCEPTABLE	E - F: > E NOT ATTAINABLE IN 5 YR - USE D AS

QUAT.No.	PROVINCE	RIVERS	EISC	DEMC	PESC	BEST AEMC
			ENTRIES			DEFAULT
C81E	FREE STATE	Wilge (main stem)	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
C81F	FREE STATE	Elands (Wilge trib.)	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
C81G	FREE STATE	Elands (Wilge trib.)	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
C81H	FREE STATE	Elands (Wilge trib.)	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
C81J	FREE STATE	Vaalbanks (Wilge trib.)	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
C81K	FREE STATE	Wilge (main stem)	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
C81L	FREE STATE	Meul (Wilge trib.)	HIGH	B: SMALL RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
C81M	FREE STATE	Meul (Wilge trib.)	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
C82A	FREE STATE	Cornelis (Wilge trib.)	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
C82B	FREE STATE	Cornelis (Wilge trib.)	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
C82C	FREE STATE	Wilge (main stem)	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
C82D	FREE STATE	Rus se Spruit (Wilge trib.)	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
C82E	FREE STATE	Holspruit (Wilge trib.)	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
C82F	FREE STATE	Grootspruit (Wilge trib.)	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
C82G	FREE STATE	Wilge (main stem)	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
C82H	FREE STATE	Wilge (main stem)	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
C83A	FREE STATE	Ash	MODERATE	C: MODERATE RISK ALLOWED	E - F: NOT AN ACCEPTABLE	E - F: NOT AN ACCEPTABLE
C83B	FREE STATE	Jordaans (copied from C83D)	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
C83C	FREE STATE	Liebenbergsvlei	MODERATE	C: MODERATE RISK ALLOWED	E - F: NOT AN ACCEPTABLE	E - F: > E NOT ATTAINABLE IN 5 YR - USE D AS DEFAULT
C83D	FREE STATE	Tierkloof	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
C83E	FREE STATE	Tierkloof	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
C83F	FREE STATE	Liebenbergsvlei	HIGH	B: SMALL RISK ALLOWED	E - F: NOT AN ACCEPTABLE	E - F: NOT AN ACCEPTABLE
C83G	FREE STATE	Liebenbergsvlei	HIGH	B: SMALL RISK ALLOWED	E - F: NOT AN ACCEPTABLE	D: LARGELY MODIFIED
C83H	FREE STATE	Libenbergsvlei	MODERATE	C: MODERATE RISK ALLOWED	E - F: NOT AN ACCEPTABLE	D: LARGELY MODIFIED
C83J	FREE STATE	Wilge (main stem)	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
C83K	FREE STATE	Kromspruit	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
C83L	FREE STATE	Klipriver	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
C83M	FREE STATE	Wilge (main stem)	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
C91A	NORTHERN CAPE	Vaal (downstream from Bloemhof dam)	MODERATE	C: MODERATE RISK ALLOWED	D: LARGELY MODIFIED	C: MODERATELY MODIFIED
C91B	NORTHERN CAPE	Vaal	HIGH	B: SMALL RISK ALLOWED	D: LARGELY MODIFIED	C: MODERATELY MODIFIED
C91C	FREE STATE	endorheic no rivers	INVALID ENTRIES	WRONG ENTRY	E - F: NOT AN ACCEPTABLE	E - F: > E NOT ATTAINABLE IN 5 YR - USE D AS DEFAULT
C91D	NORTHERN CAPE	Vaal (portion downstream of confluence with Leeurivier)	MODERATE	C: MODERATE RISK ALLOWED	D: LARGELY MODIFIED	B: LARGELY NATURAL
C91E	NORTHERN PROVINCE	Vaal	MODERATE	C: MODERATE RISK ALLOWED	D: LARGELY MODIFIED	C: MODERATELY MODIFIED
C92A	NORTHERN CAPE	Vaal (just after confluence with Harts)	HIGH	B: SMALL RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
C92B	NORTHERN CAPE	Vaal	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
C92C	NORTHERN CAPE	Vaal	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED

Fig. 11: EISC, PESC & AEMC for C11A - C21G

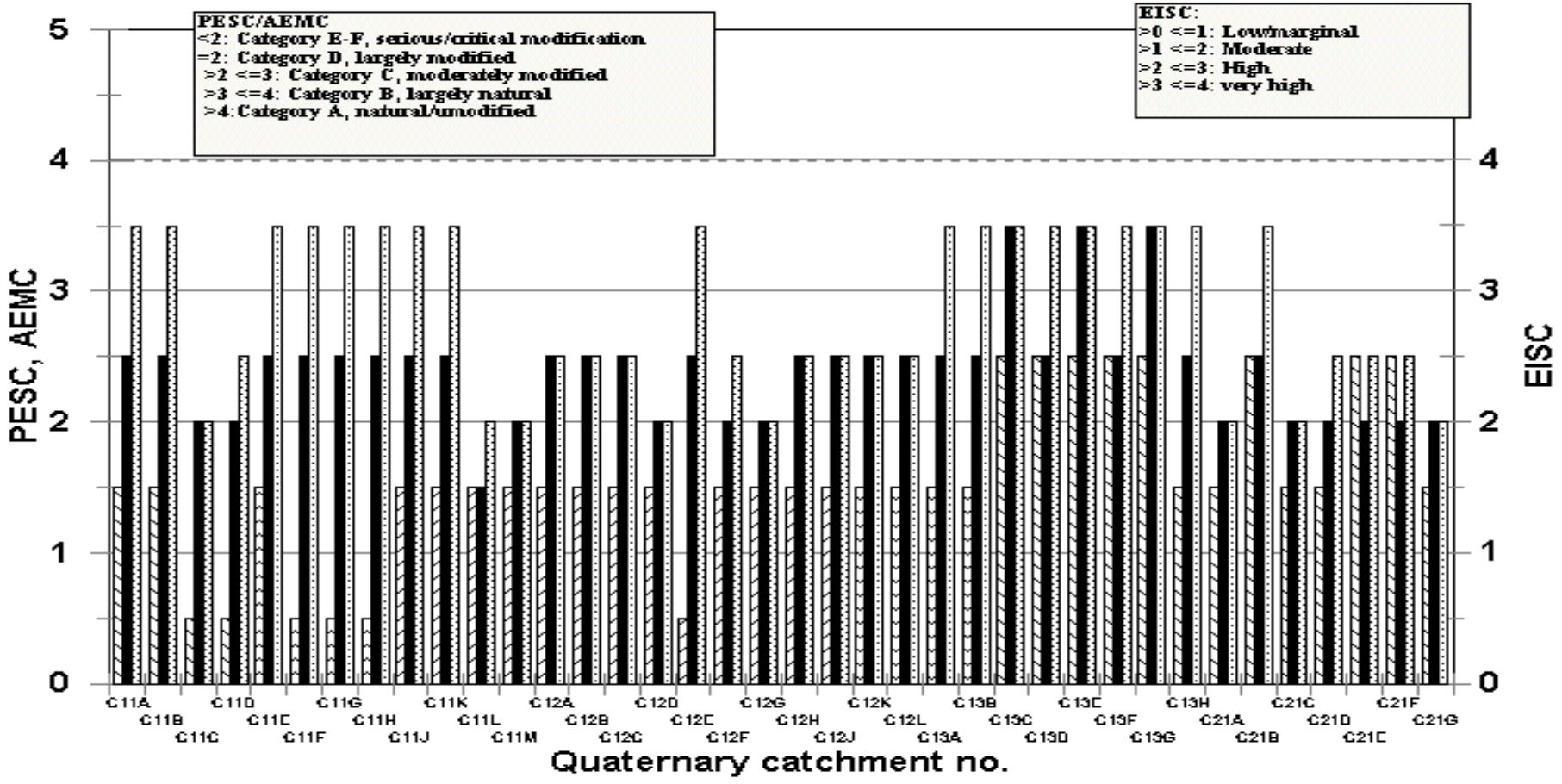


Fig.12: EISC, PESC & AEMC for C22A - C25F

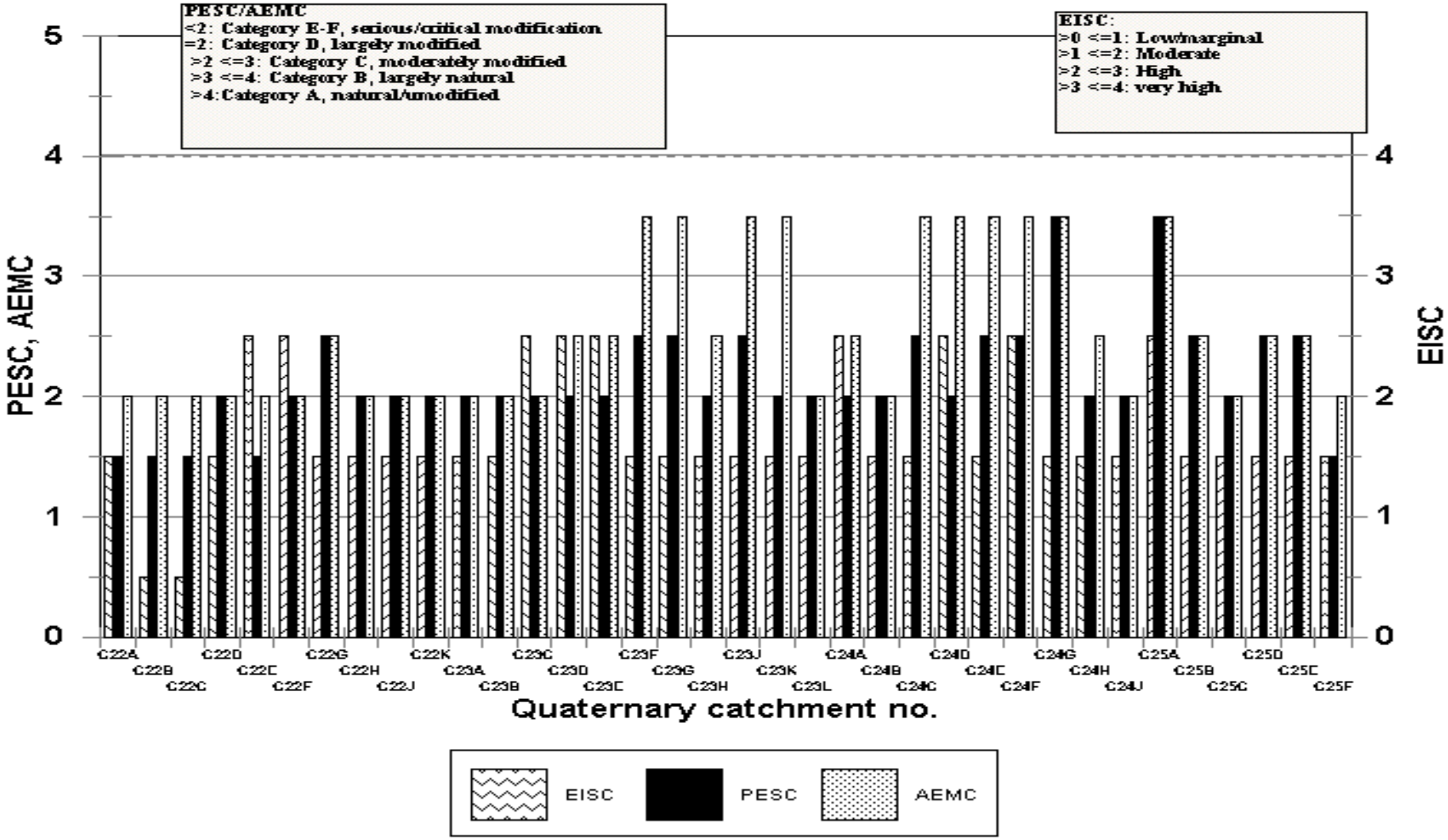


Fig.13: EISC, PESC & AEMC for C31A - C43D

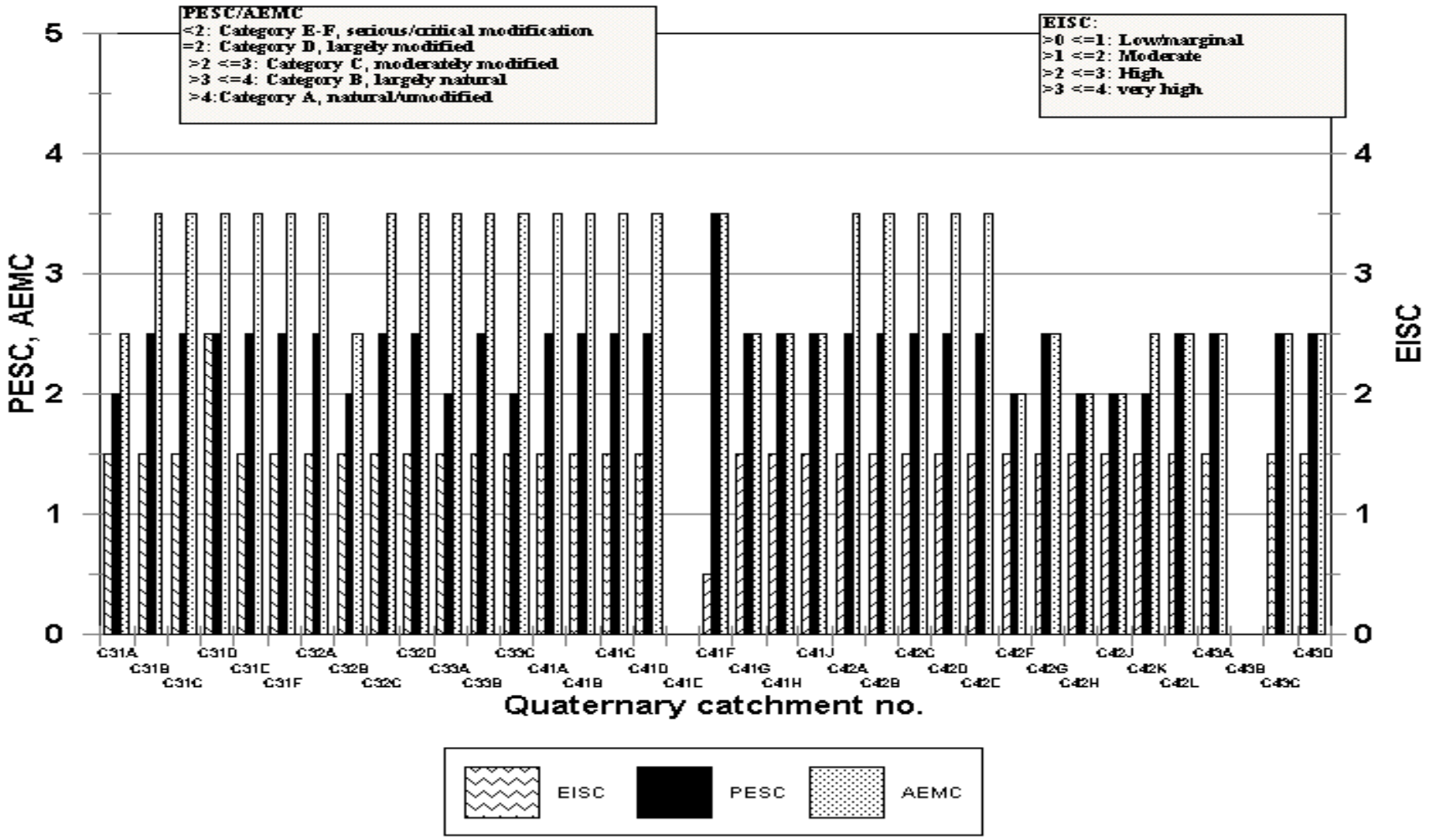


Fig.14: EISC, PESC & AEMC for C51A-C70K

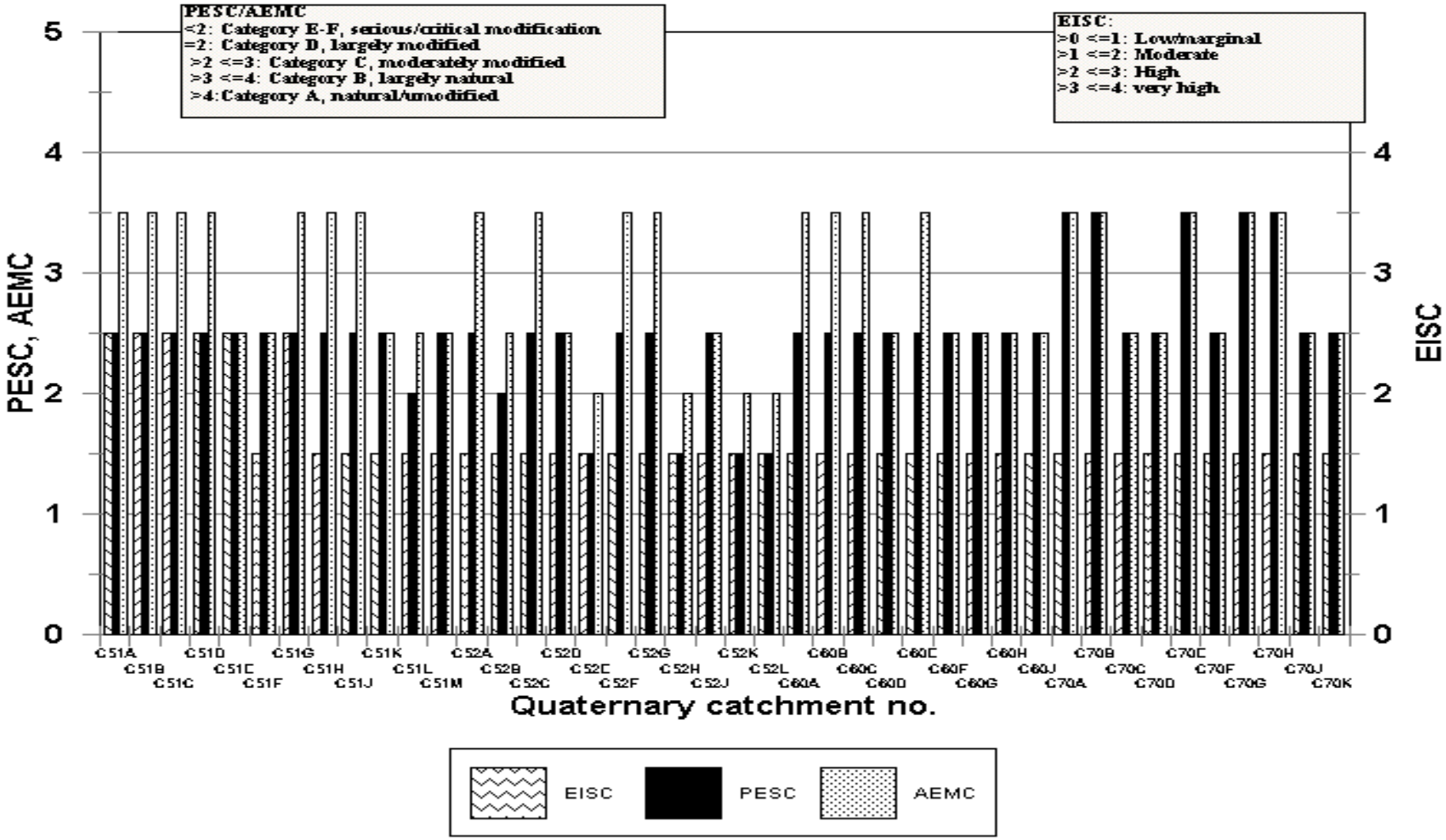


Fig.15: EISC, PESC & AEMC for C81A - C92C

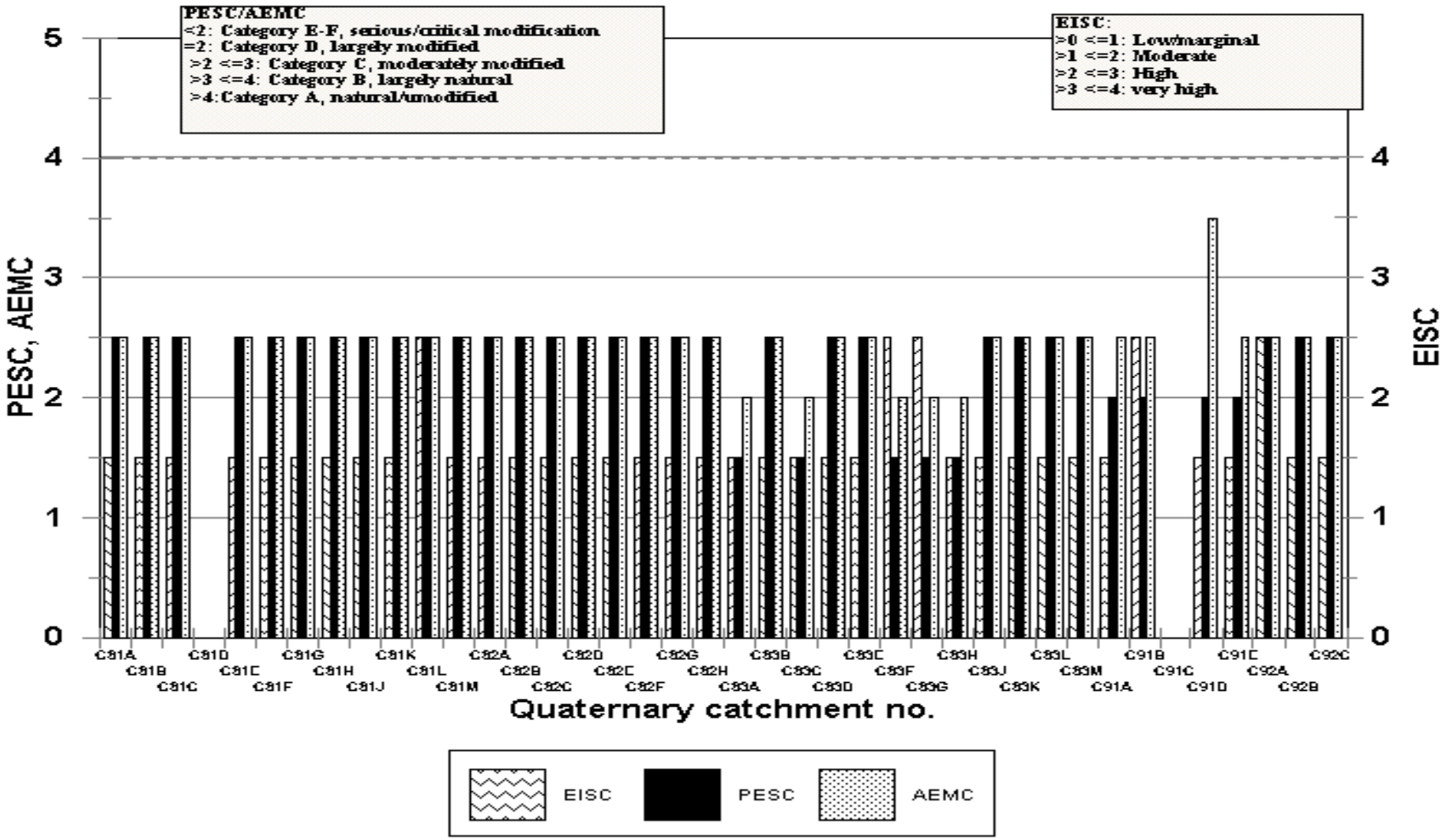


Table 4: Ratings for quaternary catchments of primary drainage D (Fig. 17 – 23).

QUAT.No.	PROVINCE	RIVERS	EISC	DEMC	PESC	BEST AEMC
D11A	**LESOTHO**					
D11B	**LESOTHO**					
D11C	**LESOTHO**					
D11D	**LESOTHO**					
D11E	**LESOTHO**					
D11F	**LESOTHO**					
D11G	**LESOTHO**					
D11H	**LESOTHO**					
D11J	**LESOTHO**					
D11K	**LESOTHO**					
D12A	FREE STATE	Orange	HIGH	B: SMALL RISK ALLOWED	B: LARGELY NATURAL	B: LARGELY NATURAL
D12B	FREE STATE	Orange TRIB (=D12D)	HIGH	B: SMALL RISK ALLOWED	B: LARGELY NATURAL	B: LARGELY NATURAL
D12C	FREE STATE	Orange	HIGH	B: SMALL RISK ALLOWED	B: LARGELY NATURAL	B: LARGELY NATURAL
D12D	FREE STATE	Trib.	HIGH	B: SMALL RISK ALLOWED	B: LARGELY NATURAL	B: LARGELY NATURAL
D12E	FREE STATE	Orange	HIGH	B: SMALL RISK ALLOWED	B: LARGELY NATURAL	B: LARGELY NATURAL
D12F	FREE STATE	Orange	HIGH	B: SMALL RISK ALLOWED	B: LARGELY NATURAL	B: LARGELY NATURAL
D13A	EASTERN CAPE	Sterk	HIGH	B: SMALL RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL
D13B	EASTERN CAPE	Bell	HIGH	B: SMALL RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL
D13C	EASTERN CAPE	Rifle	HIGH	B: SMALL RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
D13D	EASTERN CAPE	Langkloof	HIGH	B: SMALL RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL
D13E	EASTERN CAPE	Kraai (main stem)	HIGH	B: SMALL RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL
D13F	EASTERN CAPE	Kraai (main stem)	HIGH	B: SMALL RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL
D13G	EASTERN CAPE	Kraai (main stem)	HIGH	B: SMALL RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL
D13H	EASTERN CAPE	Holspruit	LOW	D: LARGE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
D13J	EASTERN CAPE	Holspruit	LOW	D: LARGE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
D13K	EASTERN CAPE	Kraai (main stem)	HIGH	B: SMALL RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL
D13L	EASTERN CAPE	Kraai (main stem)	HIGH	B: SMALL RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL
D13M	EASTERN CAPE	Kraai (main stem)	HIGH	B: SMALL RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL
D14A	FREE STATE	Orange	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL
D14B	EASTERN CAPE	Stormbergspruit/Trib	LOW	D: LARGE RISK ALLOWED	D: LARGELY MODIFIED	C: MODERATELY MODIFIED
D14C	EASTERN CAPE	Stormbergspruit/Trib	LOW	D: LARGE RISK ALLOWED	D: LARGELY MODIFIED	C: MODERATELY MODIFIED
D14D	EASTERN CAPE	Stormbergspruit	LOW	D: LARGE RISK ALLOWED	D: LARGELY MODIFIED	C: MODERATELY MODIFIED
D14E	EASTERN CAPE	Stormbergspruit	LOW	D: LARGE RISK ALLOWED	D: LARGELY MODIFIED	C: MODERATELY MODIFIED
D14F	EASTERN CAPE	Lower Stormbergspruit	MODERATE	C: MODERATE RISK ALLOWED	D: LARGELY MODIFIED	C: MODERATELY MODIFIED
D14G	EASTERN CAPE	Stormbergspruit - unamed trib (considered as part of main stem)	MODERATE	C: MODERATE RISK ALLOWED	D: LARGELY MODIFIED	C: MODERATELY MODIFIED
D14H	EASTERN CAPE	Lower Stormbergspruit	MODERATE	C: MODERATE RISK ALLOWED	D: LARGELY MODIFIED	C: MODERATELY MODIFIED
D14J	EASTERN CAPE	Orange (main stem)	HIGH	B: SMALL RISK ALLOWED	D: LARGELY MODIFIED	C: MODERATELY MODIFIED
D14K	EASTERN CAPE	Orange (main stem)	HIGH	B: SMALL RISK ALLOWED	D: LARGELY MODIFIED	B: LARGELY NATURAL
D15A	**LESOTHO**					
D15B	**LESOTHO**					
D15C	**LESOTHO**					
D15D	**LESOTHO**					
D15E	**LESOTHO**					

QUAT.No.	PROVINCE	RIVERS	EISC	DEMC	PESC	BEST AEMC
D15F	**LESOTHO**					
D15G	FREE STATE	Trib. (Kornet)	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL
D15H	FREE STATE	Trib. (Kornet)	HIGH	B: SMALL RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL
D16A	**LESOTHO**					
D16B	**LESOTHO**					
D16C	**LESOTHO**					
D16D	**LESOTHO**					
D16E	**LESOTHO**					
D16F	**LESOTHO**					
D16G	**LESOTHO**					
D16H	**LESOTHO**					
D16J	**LESOTHO**					
D16K	**LESOTHO**					
D16L	**LESOTHO**					
D16M	**LESOTHO**					
D17A	**LESOTHO**					
D17B	**LESOTHO**					
D17C	**LESOTHO**					
D17D	**LESOTHO**					
D17E	**LESOTHO**					
D17F	**LESOTHO**					
D17G	**LESOTHO**					
D17H	**LESOTHO**					
D17J	**LESOTHO**					
D17K	**LESOTHO**					
D17L	**LESOTHO**					
D17M	**LESOTHO**					
D18A	**LESOTHO**					
D18B	**LESOTHO**					
D18C	**LESOTHO**					
D18D	**LESOTHO**					
D18E	**LESOTHO**					
D18F	**LESOTHO**					
D18G	**LESOTHO**					
D18H	**LESOTHO**					
D18J	**LESOTHO**					
D18K	FREE STATE	Trib. (Orange)	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL
D18L	FREE STATE	Trib. (Senqu/Kornet?)	HIGH	B: SMALL RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL
D21A	FREE STATE	Trib. (Caledon)	HIGH	B: SMALL RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL
D21B	FREE STATE	Caledon (main stem) LESOTHO	HIGH	B: SMALL RISK ALLOWED	E - F: NOT AN ACCEPTABLE	E - F: > E NOT ATTAINABLE IN 5 YR - USE D AS DEFAULT
D21C	FREE STATE	Caledon (main stem)	HIGH	B: SMALL RISK ALLOWED	D: LARGELY MODIFIED	C: MODERATELY MODIFIED
D21D	FREE STATE	Trib. (Caledon)	HIGH	B: SMALL RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL
D21E	FREE STATE	Trib. (Caledon) = D21D	HIGH	B: SMALL RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL
D21F	FREE STATE	?	HIGH	B: SMALL RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
D21G	FREE STATE	Trib. (Caledon)	HIGH	B: SMALL RISK ALLOWED	D: LARGELY MODIFIED	C: MODERATELY MODIFIED

QUAT.No.	PROVINCE	RIVERS	EISC	DEMC	PESC	BEST AEMC
D21H	FREE STATE	Caledon (main stem)	HIGH	B: SMALL RISK ALLOWED	D: LARGELY MODIFIED	C: MODERATELY MODIFIED
D21J	**LESOTHO**					
D21K	**LESOTHO**					
D21L	FREE STATE	Caledon (main stem) (ACTUALLY IN LESOTHO)	HIGH	B: SMALL RISK ALLOWED	D: LARGELY MODIFIED	C: MODERATELY MODIFIED
D22A	FREE STATE		HIGH	B: SMALL RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
D22B	FREE STATE	Caledon (main stem)	HIGH	B: SMALL RISK ALLOWED	D: LARGELY MODIFIED	C: MODERATELY MODIFIED
D22C	FREE STATE	Caledon (main stem)	HIGH	B: SMALL RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
D22D	FREE STATE	Caledon (main stem)	HIGH	B: SMALL RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
D22E	**LESOTHO**					
D22F	FREE STATE	Caledon (main stem)	HIGH	B: SMALL RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
D22G	FREE STATE	Mopeli	HIGH	B: SMALL RISK ALLOWED	D: LARGELY MODIFIED	C: MODERATELY MODIFIED
D22H	FREE STATE	Main stem Caledon	MODERATE	C: MODERATE RISK ALLOWED	D: LARGELY MODIFIED	D: LARGELY MODIFIED
D22J	**LESOTHO**					
D22K	**LESOTHO**					
D22L	FREE STATE	Main stem Caledon	MODERATE	C: MODERATE RISK ALLOWED	D: LARGELY MODIFIED	D: LARGELY MODIFIED
D23A	FREE STATE	Main stem Caledon	MODERATE	C: MODERATE RISK ALLOWED	D: LARGELY MODIFIED	D: LARGELY MODIFIED
D23B	FREE STATE		MODERATE	C: MODERATE RISK ALLOWED	D: LARGELY MODIFIED	C: MODERATELY MODIFIED
D23C	FREE STATE	Caledon headwaters? (upstream from Armenia dam)	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
D23D	FREE STATE	Main stem Caledon??	MODERATE	C: MODERATE RISK ALLOWED	D: LARGELY MODIFIED	C: MODERATELY MODIFIED
D23E	FREE STATE	Main stem Caledon	MODERATE	C: MODERATE RISK ALLOWED	D: LARGELY MODIFIED	D: LARGELY MODIFIED
D23F	FREE STATE	Caledon trib?	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
D23G	FREE STATE	Trib. (Caledon)	HIGH	B: SMALL RISK ALLOWED	D: LARGELY MODIFIED	C: MODERATELY MODIFIED
D23H	FREE STATE	Caledon (TRIB) (PESC = D24H)	MODERATE	C: MODERATE RISK ALLOWED	B: LARGELY NATURAL	B: LARGELY NATURAL
D23J	FREE STATE	Caledon (main stem) (pesc=D23F)	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
D24A	FREE STATE	Caledon trib. (upstream from Egmont dam)	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
D24B	FREE STATE	Caledon (main stem)	MODERATE	C: MODERATE RISK ALLOWED	D: LARGELY MODIFIED	C: MODERATELY MODIFIED
D24C	FREE STATE	Caledon (main stem)	MODERATE	C: MODERATE RISK ALLOWED	D: LARGELY MODIFIED	C: MODERATELY MODIFIED
D24D	FREE STATE	Caledon (main stem)	MODERATE	C: MODERATE RISK ALLOWED	D: LARGELY MODIFIED	C: MODERATELY MODIFIED
D24E	FREE STATE	Caledon (main stem)	MODERATE	C: MODERATE RISK ALLOWED	D: LARGELY MODIFIED	C: MODERATELY MODIFIED
D24F	FREE STATE	Caledon (main stem)	MODERATE	C: MODERATE RISK ALLOWED	D: LARGELY MODIFIED	C: MODERATELY MODIFIED
D24G	FREE STATE	Caledon (main stem)	MODERATE	C: MODERATE RISK ALLOWED	D: LARGELY MODIFIED	C: MODERATELY MODIFIED
D24H	FREE STATE	Skulpspruit (trib Caledon)	HIGH	B: SMALL RISK ALLOWED	B: LARGELY NATURAL	B: LARGELY NATURAL
D24J	FREE STATE	Caledon (main stem)	MODERATE	C: MODERATE RISK ALLOWED	D: LARGELY MODIFIED	C: MODERATELY MODIFIED
D24K	FREE STATE	Trib	HIGH	B: SMALL RISK ALLOWED	B: LARGELY NATURAL	B: LARGELY NATURAL
D24L	FREE STATE	Trib (Bossiesprui??)	HIGH	B: SMALL RISK ALLOWED	B: LARGELY NATURAL	B: LARGELY NATURAL
D31A	NORTHERN CAPE	Trib of Seekoei	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
D31B	NORTHERN CAPE	Hondeblaf	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
D31C	NORTHERN CAPE	Hondeblaf?	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
D31D	NORTHERN CAPE	Trib of Seekoei	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED

QUAT.No.	PROVINCE	RIVERS	EISC	DEMC	PESC	BEST AEMC
D31E	NORTHERN CAPE	Vanderkloof dam	INVALID ENTRIES	WRONG ENTRY	E - F: NOT AN ACCEPTABLE	E - F: > E NOT ATTAINABLE IN 5 YR - USE D AS DEFAULT
D32A	NORTHERN CAPE	Noupoortsruit? (trib of Seekoei)	MODERATE	C: MODERATE RISK ALLOWED	B: LARGELY NATURAL	B: LARGELY NATURAL
D32B	NORTHERN CAPE	Trib of Seekoei	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
D32C	NORTHERN CAPE	Trib of Seekoei	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
D32D	NORTHERN CAPE	Trib of Seekoei	MODERATE	C: MODERATE RISK ALLOWED	B: LARGELY NATURAL	B: LARGELY NATURAL
D32E	NORTHERN CAPE	Trib of Seekoei	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
D32F	NORTHERN CAPE	Seekoei	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
D32G	NORTHERN CAPE	Elandsfonteinspruit (trib of Seekoei)	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
D32H	NORTHERN CAPE	Elands	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
D32J	NORTHERN CAPE	Seekoei	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
D32K	NORTHERN CAPE	Seekoei	MODERATE	C: MODERATE RISK ALLOWED	D: LARGELY MODIFIED	C: MODERATELY MODIFIED
D33A	NORTHERN CAPE	Orange (main stem)	HIGH	B: SMALL RISK ALLOWED	D: LARGELY MODIFIED	B: LARGELY NATURAL
D33B	NORTHERN CAPE	Unanmed trib of Orange (probably highly seasonal)	MODERATE	C: MODERATE RISK ALLOWED	D: LARGELY MODIFIED	D: LARGELY MODIFIED
D33C	NORTHERN CAPE	Orange (main stem)	HIGH	B: SMALL RISK ALLOWED	D: LARGELY MODIFIED	B: LARGELY NATURAL
D33D	NORTHERN CAPE	Orange (main stem)	HIGH	B: SMALL RISK ALLOWED	D: LARGELY MODIFIED	B: LARGELY NATURAL
D33E	NORTHERN CAPE	Orange (main stem)	HIGH	B: SMALL RISK ALLOWED	D: LARGELY MODIFIED	B: LARGELY NATURAL
D33F	NORTHERN CAPE	Orange (main stem)	HIGH	B: SMALL RISK ALLOWED	D: LARGELY MODIFIED	B: LARGELY NATURAL
D33G	NORTHERN CAPE	Orange (main stem)	HIGH	B: SMALL RISK ALLOWED	D: LARGELY MODIFIED	B: LARGELY NATURAL
D33H	NORTHERN CAPE	Orange (main stem)	HIGH	B: SMALL RISK ALLOWED	D: LARGELY MODIFIED	B: LARGELY NATURAL
D33J	NORTHERN CAPE	Orange (main stem)	HIGH	B: SMALL RISK ALLOWED	D: LARGELY MODIFIED	B: LARGELY NATURAL
D33K	NORTHERN CAPE	Orange (main stem)	HIGH	B: SMALL RISK ALLOWED	D: LARGELY MODIFIED	B: LARGELY NATURAL
D34A	NORTHERN CAPE	Main stem Orange (in between Gariep and Vanderkloof)	MODERATE	C: MODERATE RISK ALLOWED	D: LARGELY MODIFIED	B: LARGELY NATURAL
D34B	NORTHERN CAPE	Oorlogspoorivier?	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
D34C	NORTHERN CAPE	Oorlogspoort??	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
D34D	NORTHERN CAPE	Oorlogspoort?	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
D34E	NORTHERN CAPE	Main stem Orange (in between Gariep and Vanderkloof)	MODERATE	C: MODERATE RISK ALLOWED	D: LARGELY MODIFIED	B: LARGELY NATURAL
D34F	NORTHERN CAPE	Main stem Orange (in between Gariep and Vanderkloof)	MODERATE	C: MODERATE RISK ALLOWED	D: LARGELY MODIFIED	B: LARGELY NATURAL
D34G	NORTHERN CAPE	Main stem Orange (in between Gariep and Vanderkloof)	MODERATE	C: MODERATE RISK ALLOWED	D: LARGELY MODIFIED	B: LARGELY NATURAL
D35A	FREE STATE	Trib draining into Gariep dam	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL
D35B	EASTERN CAPE	Oudagspruit	LOW	D: LARGE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
D35C	EASTERN CAPE	Brookspruit	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
D35D	EASTERN CAPE	Brookspruit	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
D35E	EASTERN CAPE	Brookspruit	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
D35F	FREE STATE	Trib draining into Gariep	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED

QUAT.No.	PROVINCE	RIVERS	EISC	DEMC	PESC	BEST AEMC
D35G	EASTERN CAPE	Brakspruit	LOW	D: LARGE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
D35H	EASTERN CAPE	Gariep Dam	INVALID ENTRIES	WRONG ENTRY	E - F: NOT AN ACCEPTABLE	E - F: > E NOT ATTAINABLE IN 5 YR - USE D AS DEFAULT
D35J	EASTERN CAPE	Suurbergspruit	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
D35K	FREE STATE	Gariep Dam	INVALID ENTRIES	WRONG ENTRY	E - F: NOT AN ACCEPTABLE	E - F: > E NOT ATTAINABLE IN 5 YR - USE D AS DEFAULT
D41A	NORTHERN CAPE	MOLOPO OOG	HIGH	B: SMALL RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL
D41B	NORTHERN CAPE	SETLAGOLI	LOW	D: LARGE RISK ALLOWED	B: LARGELY NATURAL	B: LARGELY NATURAL
D41C	NORTHERN CAPE	TRIB MOLOPO	LOW	D: LARGE RISK ALLOWED	B: LARGELY NATURAL	B: LARGELY NATURAL
D41D	NORTHERN CAPE	TRIB MOLOPO	LOW	D: LARGE RISK ALLOWED	B: LARGELY NATURAL	B: LARGELY NATURAL
D41E	NORTHERN CAPE	MOLOPO	LOW	D: LARGE RISK ALLOWED	B: LARGELY NATURAL	B: LARGELY NATURAL
D41F	NORTHERN CAPE	PHEPANE	LOW	D: LARGE RISK ALLOWED	B: LARGELY NATURAL	B: LARGELY NATURAL
D41G	NORTHERN CAPE	MOSHAWENG	LOW	D: LARGE RISK ALLOWED	B: LARGELY NATURAL	B: LARGELY NATURAL
D41H	NORTHERN CAPE	KGOKGOLE	LOW	D: LARGE RISK ALLOWED	B: LARGELY NATURAL	B: LARGELY NATURAL
D41J	NORTHERN CAPE	TRIB KURUMAN	LOW	D: LARGE RISK ALLOWED	B: LARGELY NATURAL	B: LARGELY NATURAL
D41K	NORTHERN CAPE	TRIB KURUMAN	LOW	D: LARGE RISK ALLOWED	B: LARGELY NATURAL	B: LARGELY NATURAL
D41L	NORTHERN CAPE	KURUMAN OOG	MODERATE	C: MODERATE RISK ALLOWED	B: LARGELY NATURAL	B: LARGELY NATURAL
D41M	NORTHERN CAPE	KURUMAN	LOW	D: LARGE RISK ALLOWED	B: LARGELY NATURAL	B: LARGELY NATURAL
D42A	NORTHERN CAPE	Auob R: NB Subterranean water important)	MODERATE	C: MODERATE RISK ALLOWED	B: LARGELY NATURAL	B: LARGELY NATURAL
D42B	NORTHERN CAPE	Nossob R	MODERATE	C: MODERATE RISK ALLOWED	B: LARGELY NATURAL	B: LARGELY NATURAL
D42C	NORTHERN CAPE	Kuruman R	LOW	D: LARGE RISK ALLOWED	B: LARGELY NATURAL	B: LARGELY NATURAL
D42D	NORTHERN CAPE	Molopo R	LOW	D: LARGE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
D42E	NORTHERN CAPE	Molopo R.	LOW	D: LARGE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
D51A	NORTHERN CAPE	RENOSTER RIVER	LOW	D: LARGE RISK ALLOWED	B: LARGELY NATURAL	B: LARGELY NATURAL
D51B	NORTHERN CAPE	RENOSTER RIVER: Onderplaas to Sterkfontein	LOW	D: LARGE RISK ALLOWED	B: LARGELY NATURAL	B: LARGELY NATURAL
D51C	NORTHERN CAPE	RENOSTER RIVER	LOW	D: LARGE RISK ALLOWED	B: LARGELY NATURAL	B: LARGELY NATURAL
D52A	NORTHERN CAPE	Vis	LOW	D: LARGE RISK ALLOWED	B: LARGELY NATURAL	B: LARGELY NATURAL
D52B	NORTHERN CAPE	Vis	LOW	D: LARGE RISK ALLOWED	B: LARGELY NATURAL	B: LARGELY NATURAL
D52C	NORTHERN CAPE	Vis	LOW	D: LARGE RISK ALLOWED	B: LARGELY NATURAL	B: LARGELY NATURAL
D52D	NORTHERN CAPE	Muiskraal	LOW	D: LARGE RISK ALLOWED	B: LARGELY NATURAL	B: LARGELY NATURAL
D52E	NORTHERN CAPE	Vis	LOW	D: LARGE RISK ALLOWED	B: LARGELY NATURAL	B: LARGELY NATURAL
D52F	NORTHERN CAPE	Vis	LOW	D: LARGE RISK ALLOWED	B: LARGELY NATURAL	B: LARGELY NATURAL
D53A	NORTHERN CAPE	Hartbees	LOW	D: LARGE RISK ALLOWED	B: LARGELY NATURAL	B: LARGELY NATURAL
D53B	NORTHERN CAPE	Hartbees	LOW	D: LARGE RISK ALLOWED	B: LARGELY NATURAL	B: LARGELY NATURAL
D53C	NORTHERN CAPE	Hartbees: kenhardt to Tuins R confl.	LOW	D: LARGE RISK ALLOWED	B: LARGELY NATURAL	B: LARGELY NATURAL
D53D	NORTHERN CAPE	Tuins	LOW	D: LARGE RISK ALLOWED	B: LARGELY NATURAL	B: LARGELY NATURAL
D53E	NORTHERN CAPE	Hartbees: Tuins to Sout R confl	LOW	D: LARGE RISK ALLOWED	B: LARGELY NATURAL	B: LARGELY NATURAL
D53F	NORTHERN CAPE	ENDORHEIC	LOW	D: LARGE RISK ALLOWED	B: LARGELY NATURAL	B: LARGELY NATURAL
D53G	NORTHERN CAPE	Upper Sout	LOW	D: LARGE RISK ALLOWED	B: LARGELY NATURAL	B: LARGELY NATURAL
D53H	NORTHERN CAPE	Middle Sout to Hartbees confl	LOW	D: LARGE RISK ALLOWED	B: LARGELY NATURAL	B: LARGELY NATURAL

QUAT.No.	PROVINCE	RIVERS	EISC	DEMC	PESC	BEST AEMC
D53J	NORTHERN CAPE	Hartbees from Sout R to Orange	LOW	D: LARGE RISK ALLOWED	B: LARGELY NATURAL	B: LARGELY NATURAL
D54A	NORTHERN CAPE	Carnavonsleegte source to Dwaalberg	LOW	D: LARGE RISK ALLOWED	B: LARGELY NATURAL	B: LARGELY NATURAL
D54B	NORTHERN CAPE	Boesak R: carnavons leegte to just N of Vanwyksvlei	LOW	D: LARGE RISK ALLOWED	B: LARGELY NATURAL	B: LARGELY NATURAL
D54C	NORTHERN CAPE	Vanwyksvlei	LOW	D: LARGE RISK ALLOWED	B: LARGELY NATURAL	B: LARGELY NATURAL
D54D	NORTHERN CAPE	(Mostly ENDOREIC)	LOW	D: LARGE RISK ALLOWED	B: LARGELY NATURAL	B: LARGELY NATURAL
D54E	NORTHERN CAPE	No rivers - endoreic	LOW	D: LARGE RISK ALLOWED	B: LARGELY NATURAL	B: LARGELY NATURAL
D54F	NORTHERN CAPE	No rivers - endoreic	LOW	D: LARGE RISK ALLOWED	B: LARGELY NATURAL	B: LARGELY NATURAL
D54G	NORTHERN CAPE	nameless tributary + carnavansleegte to Sak R confl	LOW	D: LARGE RISK ALLOWED	B: LARGELY NATURAL	B: LARGELY NATURAL
D55A	NORTHERN CAPE	Sak R Headwaters to Jakkalsfontein	LOW	D: LARGE RISK ALLOWED	B: LARGELY NATURAL	B: LARGELY NATURAL
D55B	NORTHERN CAPE	RENOSTER RIVER	LOW	D: LARGE RISK ALLOWED	B: LARGELY NATURAL	B: LARGELY NATURAL
D55C	NORTHERN CAPE	Brak R source to Loxton, incl Damfontein se rivier	LOW	D: LARGE RISK ALLOWED	B: LARGELY NATURAL	B: LARGELY NATURAL
D55D	NORTHERN CAPE	Brak R: Loxton to Sak R, incl Slangfontein se Riviers	LOW	D: LARGE RISK ALLOWED	B: LARGELY NATURAL	B: LARGELY NATURAL
D55E	NORTHERN CAPE	Sak R. Brak R cnfl to Sout R confl.	LOW	D: LARGE RISK ALLOWED	B: LARGELY NATURAL	B: LARGELY NATURAL
D55F	NORTHERN CAPE	Brak R to Gansvlei R confl	LOW	D: LARGE RISK ALLOWED	B: LARGELY NATURAL	B: LARGELY NATURAL
D55G	NORTHERN CAPE	Gansvlei R to Brak R confl	LOW	D: LARGE RISK ALLOWED	B: LARGELY NATURAL	B: LARGELY NATURAL
D55H	NORTHERN CAPE	Sak R: Brak confl to Middle of Bundu	LOW	D: LARGE RISK ALLOWED	B: LARGELY NATURAL	B: LARGELY NATURAL
D55J	NORTHERN CAPE	Sak R: Md Bundu to Klein Sak R confl	LOW	D: LARGE RISK ALLOWED	B: LARGELY NATURAL	B: LARGELY NATURAL
D55K	NORTHERN CAPE	Klein Sak to Sak R. confl	LOW	D: LARGE RISK ALLOWED	B: LARGELY NATURAL	B: LARGELY NATURAL
D55L	NORTHERN CAPE	Sak R from K. Sak confl to Blouheuwel	LOW	D: LARGE RISK ALLOWED	B: LARGELY NATURAL	B: LARGELY NATURAL
D55M	NORTHERN CAPE	Sak: Blouheuwel to Vis R confl	LOW	D: LARGE RISK ALLOWED	B: LARGELY NATURAL	B: LARGELY NATURAL
D56A	NORTHERN CAPE	Portugals R	LOW	D: LARGE RISK ALLOWED	B: LARGELY NATURAL	B: LARGELY NATURAL
D56B	NORTHERN CAPE	Riet R to Portugals R	LOW	D: LARGE RISK ALLOWED	B: LARGELY NATURAL	B: LARGELY NATURAL
D56C	NORTHERN CAPE	Nameless R & Riet from Portugal confl to onder Riet R	LOW	D: LARGE RISK ALLOWED	B: LARGELY NATURAL	B: LARGELY NATURAL
D56D	NORTHERN CAPE	Riet R: Onder Rier R to Klein RR confl	LOW	D: LARGE RISK ALLOWED	B: LARGELY NATURAL	B: LARGELY NATURAL
D56E	NORTHERN CAPE	Klein Riet R source	LOW	D: LARGE RISK ALLOWED	B: LARGELY NATURAL	B: LARGELY NATURAL
D56F	NORTHERN CAPE	Klein Riet and Kabee R - Middle	LOW	D: LARGE RISK ALLOWED	B: LARGELY NATURAL	B: LARGELY NATURAL
D56G	NORTHERN CAPE	K Riet R	LOW	D: LARGE RISK ALLOWED	B: LARGELY NATURAL	B: LARGELY NATURAL

QUAT.No.	PROVINCE	RIVERS	EISC	DEMC	PESC	BEST AEMC
D56H	NORTHERN CAPE	REElands R to Riet confl	LOW	D: LARGE RISK ALLOWED	B: LARGELY NATURAL	B: LARGELY NATURAL
D56J	NORTHERN CAPE	Riet R: Elands confl to Renoster confl + Leenderts R	LOW	D: LARGE RISK ALLOWED	B: LARGELY NATURAL	B: LARGELY NATURAL
D57A	NORTHERN CAPE	Sak R: Vis confl to Enkeldoorn	LOW	D: LARGE RISK ALLOWED	B: LARGELY NATURAL	B: LARGELY NATURAL
D57B	NORTHERN CAPE	No rivers	LOW	D: LARGE RISK ALLOWED	B: LARGELY NATURAL	B: LARGELY NATURAL
D57C	NORTHERN CAPE	Sak R. Enkeldoorn to Brandvlei	LOW	D: LARGE RISK ALLOWED	B: LARGELY NATURAL	B: LARGELY NATURAL
D57D	NORTHERN CAPE	Sak R: Brandvlei to Grootvloer inflow	LOW	D: LARGE RISK ALLOWED	B: LARGELY NATURAL	B: LARGELY NATURAL
D57E	NORTHERN CAPE		LOW	D: LARGE RISK ALLOWED	B: LARGELY NATURAL	B: LARGELY NATURAL
D58A	NORTHERN CAPE	Renoster: Riet confl to Vis R confl	LOW	D: LARGE RISK ALLOWED	B: LARGELY NATURAL	B: LARGELY NATURAL
D58B	NORTHERN CAPE	Vis R. Renoster confl to Klein Vis confl	LOW	D: LARGE RISK ALLOWED	B: LARGELY NATURAL	B: LARGELY NATURAL
D58C	NORTHERN CAPE	Vis R: Vis confl to Sak R confl	LOW	D: LARGE RISK ALLOWED	B: LARGELY NATURAL	B: LARGELY NATURAL
D61A	NORTHERN CAPE	Ongers R: source nr ichmond to Larkens R confl at Merriman	LOW	D: LARGE RISK ALLOWED	B: LARGELY NATURAL	B: LARGELY NATURAL
D61B	NORTHERN CAPE	Laken R to Ongers R confl near Merriman	LOW	D: LARGE RISK ALLOWED	B: LARGELY NATURAL	B: LARGELY NATURAL
D61C	NORTHERN CAPE	Ongers: Laken R confl to Brak confl	LOW	D: LARGE RISK ALLOWED	B: LARGELY NATURAL	B: LARGELY NATURAL
D61D	NORTHERN CAPE	Brakpoort to Visgat confl	LOW	D: LARGE RISK ALLOWED	B: LARGELY NATURAL	B: LARGELY NATURAL
D61E	NORTHERN CAPE	Visgat R to Brakpoort confl	LOW	D: LARGE RISK ALLOWED	B: LARGELY NATURAL	B: LARGELY NATURAL
D61F	NORTHERN CAPE	Brak source to minor road	LOW	D: LARGE RISK ALLOWED	B: LARGELY NATURAL	B: LARGELY NATURAL
D61G	NORTHERN CAPE	Brak R: Minor Rd to Vosburg Rd	LOW	D: LARGE RISK ALLOWED	B: LARGELY NATURAL	B: LARGELY NATURAL
D61H	NORTHERN CAPE	Brak R from Vosbburg Rd + Visgat R to Ongers R	LOW	D: LARGE RISK ALLOWED	B: LARGELY NATURAL	B: LARGELY NATURAL
D61J	NORTHERN CAPE	Groen R - upper	LOW	D: LARGE RISK ALLOWED	B: LARGELY NATURAL	B: LARGELY NATURAL
D61K	NORTHERN CAPE	Upper Smartt Syndicate - Groen R	LOW	D: LARGE RISK ALLOWED	B: LARGELY NATURAL	B: LARGELY NATURAL
D61L	NORTHERN CAPE	perdepoortsleegte to Smartt Synd (Mostly Endoreic)	LOW	D: LARGE RISK ALLOWED	B: LARGELY NATURAL	B: LARGELY NATURAL
D61M	NORTHERN CAPE	Ongers R: Brak confl to Smartt Synd Dam	LOW	D: LARGE RISK ALLOWED	B: LARGELY NATURAL	B: LARGELY NATURAL
D62A	NORTHERN CAPE	Ongers: Smart Syndicate to Minnieskloof Sta	LOW	D: LARGE RISK ALLOWED	B: LARGELY NATURAL	B: LARGELY NATURAL
D62B	NORTHERN CAPE	Ongers R: (Mostly Endoreic)	LOW	D: LARGE RISK ALLOWED	B: LARGELY NATURAL	B: LARGELY NATURAL

QUAT.No.	PROVINCE	RIVERS	EISC	DEMC	PESC	BEST AEMC
D62C	NORTHERN CAPE	Elandsfontein R: siurce to brak R confl at Biega se Berg	LOW	D: LARGE RISK ALLOWED	B: LARGELY NATURAL	B: LARGELY NATURAL
D62D	NORTHERN CAPE	Brak R confl to Elandsfontein confl	LOW	D: LARGE RISK ALLOWED	B: LARGELY NATURAL	B: LARGELY NATURAL
D62E	NORTHERN CAPE	Brak R: Boomplaas to Bulberg	LOW	D: LARGE RISK ALLOWED	B: LARGELY NATURAL	B: LARGELY NATURAL
D62F	NORTHERN CAPE	(Endoreic)	LOW	D: LARGE RISK ALLOWED	B: LARGELY NATURAL	B: LARGELY NATURAL
D62G	NORTHERN CAPE	Brak R: Bulberg to Ongers confl	LOW	D: LARGE RISK ALLOWED	B: LARGELY NATURAL	B: LARGELY NATURAL
D62H	NORTHERN CAPE	(Endoreic)	LOW	D: LARGE RISK ALLOWED	B: LARGELY NATURAL	B: LARGELY NATURAL
D62J	NORTHERN CAPE	Ongers R: Brak confl to Orange confl.	LOW	D: LARGE RISK ALLOWED	B: LARGELY NATURAL	B: LARGELY NATURAL
D71A	NORTHERN CAPE	ORANGE RIVER: Vaal confluence to Reads Drift	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
D71B	NORTHERN CAPE	trib of Orange R flowing through Griekwastad	LOW	D: LARGE RISK ALLOWED	B: LARGELY NATURAL	B: LARGELY NATURAL
D71C	NORTHERN CAPE	ORANGE RIVER: Reeds Drift to Eben	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
D71D	NORTHERN CAPE	ORANGE RIVER: Eben to Wonderdraai	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
D72A	NORTHERN CAPE	ORANGE RIVER: Wonderdraai to Prieska	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
D72B	NORTHERN CAPE	ORANGE R: Prieska to Westerberg	HIGH	B: SMALL RISK ALLOWED	B: LARGELY NATURAL	B: LARGELY NATURAL
D72C	NORTHERN CAPE	ORANGE R: Westerberg to Boegoeberg	HIGH	B: SMALL RISK ALLOWED	B: LARGELY NATURAL	B: LARGELY NATURAL
D73A	NORTHERN CAPE	(ENDORHEIC): Postmasburg	LOW	D: LARGE RISK ALLOWED	B: LARGELY NATURAL	B: LARGELY NATURAL
D73B	NORTHERN CAPE	ORANGE R: Boegoeberg Dam to Boegoeberg Mnts	HIGH	B: SMALL RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
D73C	NORTHERN CAPE	ORANGE R: Buchuberg Mnts to Kheis	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
D73D	NORTHERN CAPE	ORANGE R: Kheis to Grootdrink	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
D73E	NORTHERN CAPE	ORANGE: Grootdrink to Upington	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
D73F	NORTHERN CAPE	ORANGE R: Upington to Kakamas	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
D81A	NORTHERN CAPE	ORANGE RIVER: Kakamas to Blouputs	HIGH	B: SMALL RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
D81B	NORTHERN CAPE	ORANGE R. Blouputs to Daberas	HIGH	B: SMALL RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
D81C	NORTHERN CAPE	Brak R (Mostly endorHEIC)	LOW	D: LARGE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED

QUAT.No.	PROVINCE	RIVERS	EISC	DEMC	PESC	BEST AEMC
D81D	NORTHERN CAPE	ORANGE R: Daberas to Skuitdrift	HIGH	B: SMALL RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
D81E	NORTHERN CAPE	ORANGE R: Skuitdrift to Onseepkans	HIGH	B: SMALL RISK ALLOWED	B: LARGELY NATURAL	B: LARGELY NATURAL
D81F	NORTHERN CAPE	ORANGE R: Onseepkans to Pella	HIGH	B: SMALL RISK ALLOWED	B: LARGELY NATURAL	B: LARGELY NATURAL
D81G	NORTHERN CAPE	ORANGE R: Pella to Klein Pella	HIGH	B: SMALL RISK ALLOWED	B: LARGELY NATURAL	B: LARGELY NATURAL
D82A	NORTHERN CAPE	ORANGE R: Klein Pella to Goodhouse	HIGH	B: SMALL RISK ALLOWED	B: LARGELY NATURAL	B: LARGELY NATURAL
D82B	NORTHERN CAPE	(ENDORHEIC)	LOW	D: LARGE RISK ALLOWED	B: LARGELY NATURAL	B: LARGELY NATURAL
D82C	NORTHERN CAPE	(ENDORHEIC)	LOW	D: LARGE RISK ALLOWED	B: LARGELY NATURAL	B: LARGELY NATURAL
D82D	NORTHERN CAPE	ORANGE R: Pella to Henkries	MODERATE	C: MODERATE RISK ALLOWED	B: LARGELY NATURAL	B: LARGELY NATURAL
D82E	NORTHERN CAPE	ORANGE R: Henkries to upstream of Vioolsdrift	HIGH	B: SMALL RISK ALLOWED	B: LARGELY NATURAL	B: LARGELY NATURAL
D82F	NORTHERN CAPE	ORANGE R: Vioolsdrift	HIGH	B: SMALL RISK ALLOWED	B: LARGELY NATURAL	B: LARGELY NATURAL
D82G	NORTHERN CAPE	ORANGE R: Vioolsdrift to Modderdrift: Groen R.	HIGH	B: SMALL RISK ALLOWED	B: LARGELY NATURAL	B: LARGELY NATURAL
D82H	NORTHERN CAPE	ORANGE R: Stinkfontein se Rivier	HIGH	B: SMALL RISK ALLOWED	B: LARGELY NATURAL	B: LARGELY NATURAL
D82J	NORTHERN CAPE	ORANGE R: Aussenkeer	HIGH	B: SMALL RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
D82K	NORTHERN CAPE	ORANGE R: Sendlinsdrift to Annisrivier confl	HIGH	B: SMALL RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
D82L	NORTHERN CAPE	ORANGE R: Annisrivier to mouth	LOW	D: LARGE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED

Fig. 16: EISC, PESC & AEMC for D11A - D14K

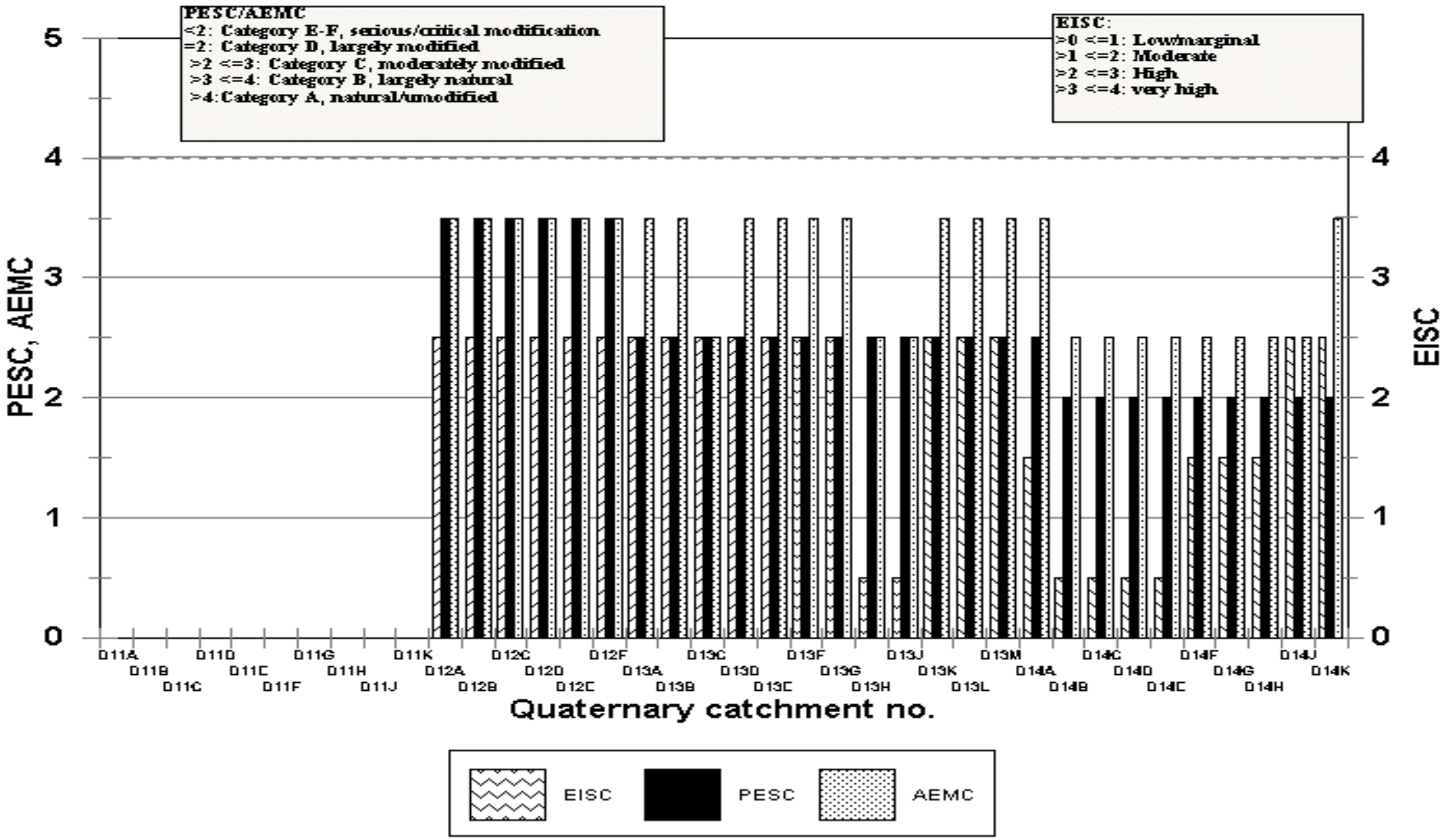


Fig.17: EISC, PESC & AEMC for D15A - D18L

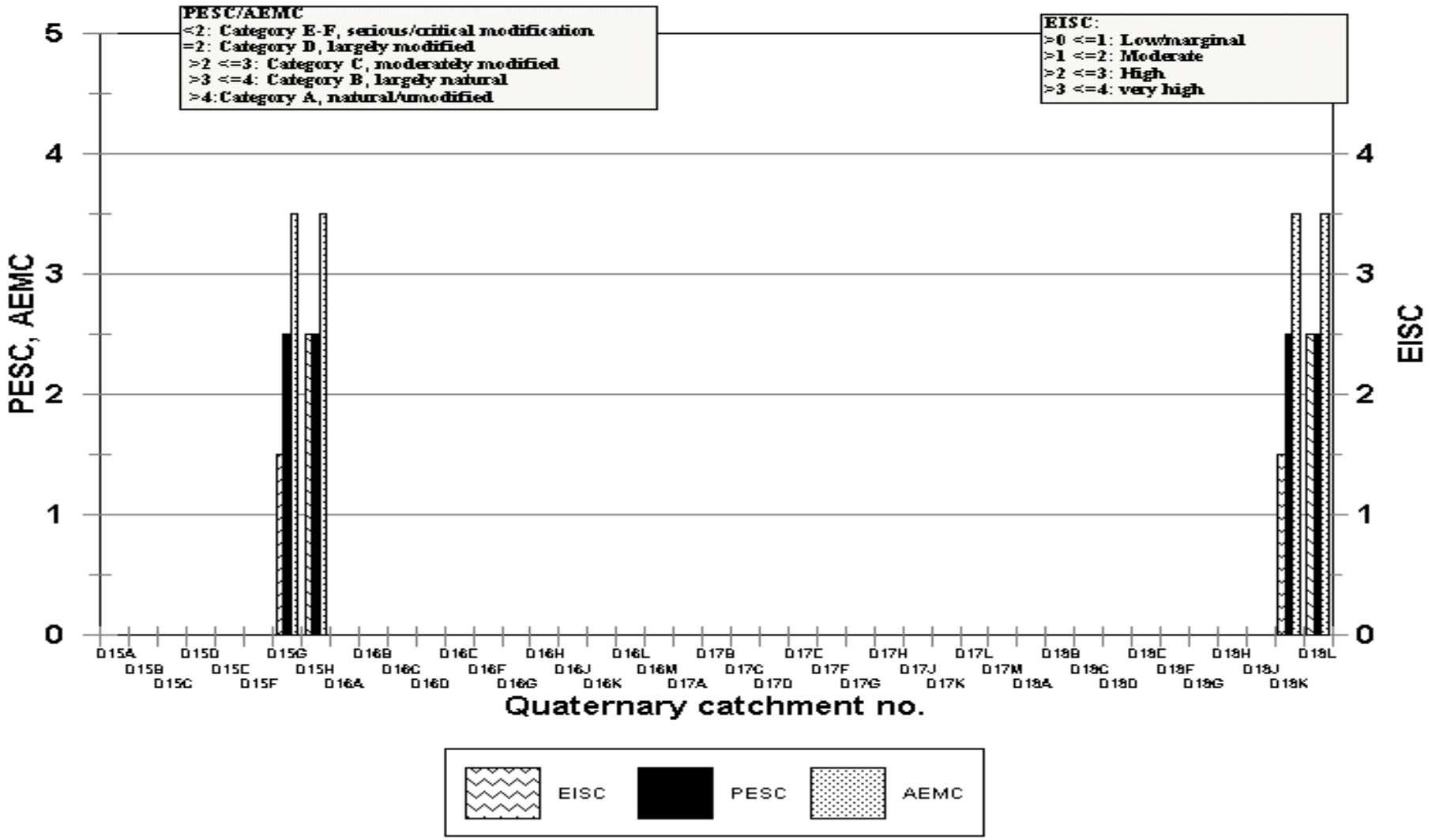


Fig.18: EISC, PESC & AEMC for D21A - D24L

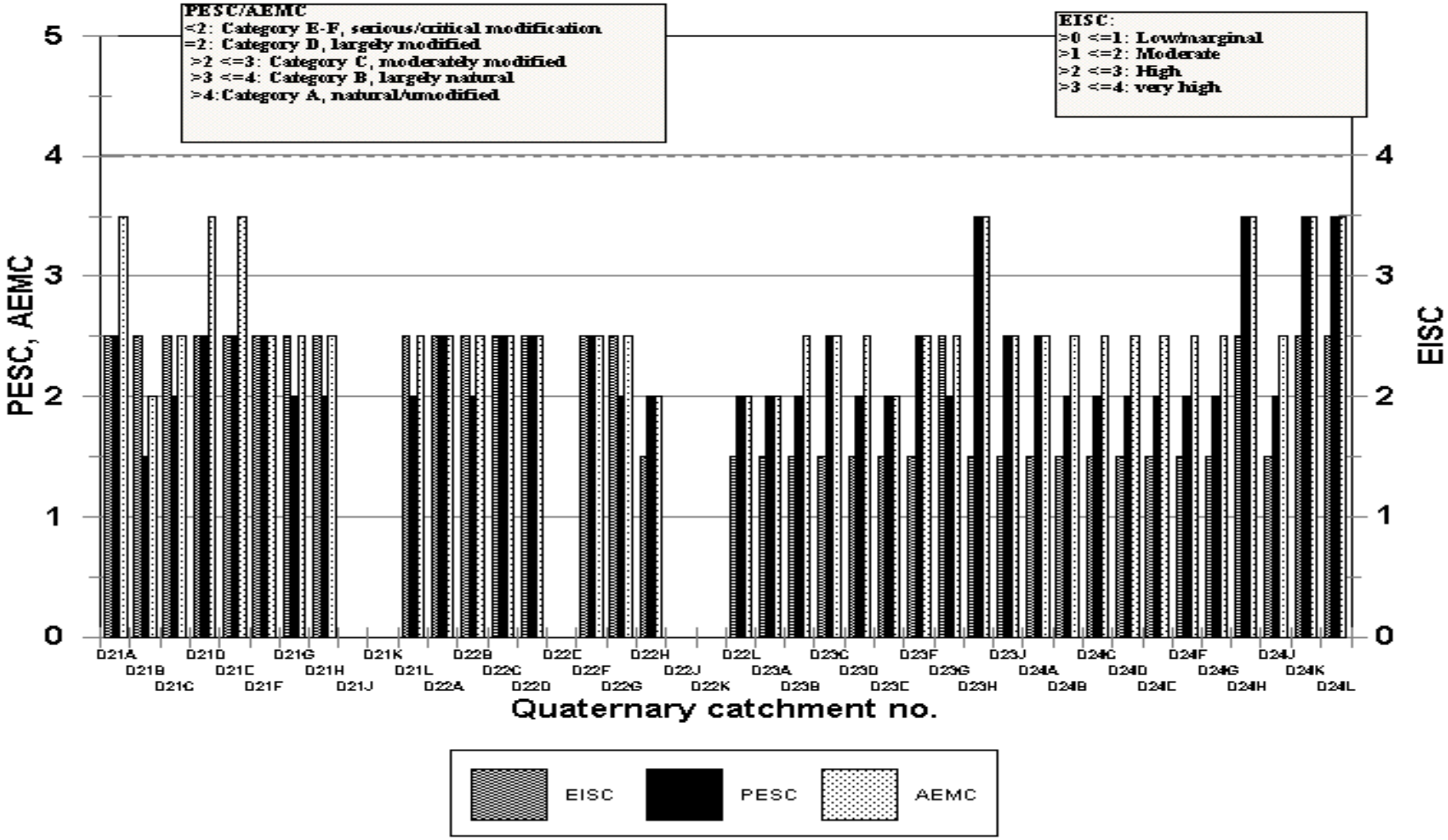


Fig.19: EISC, PESC & AEMC for D31A - D35K

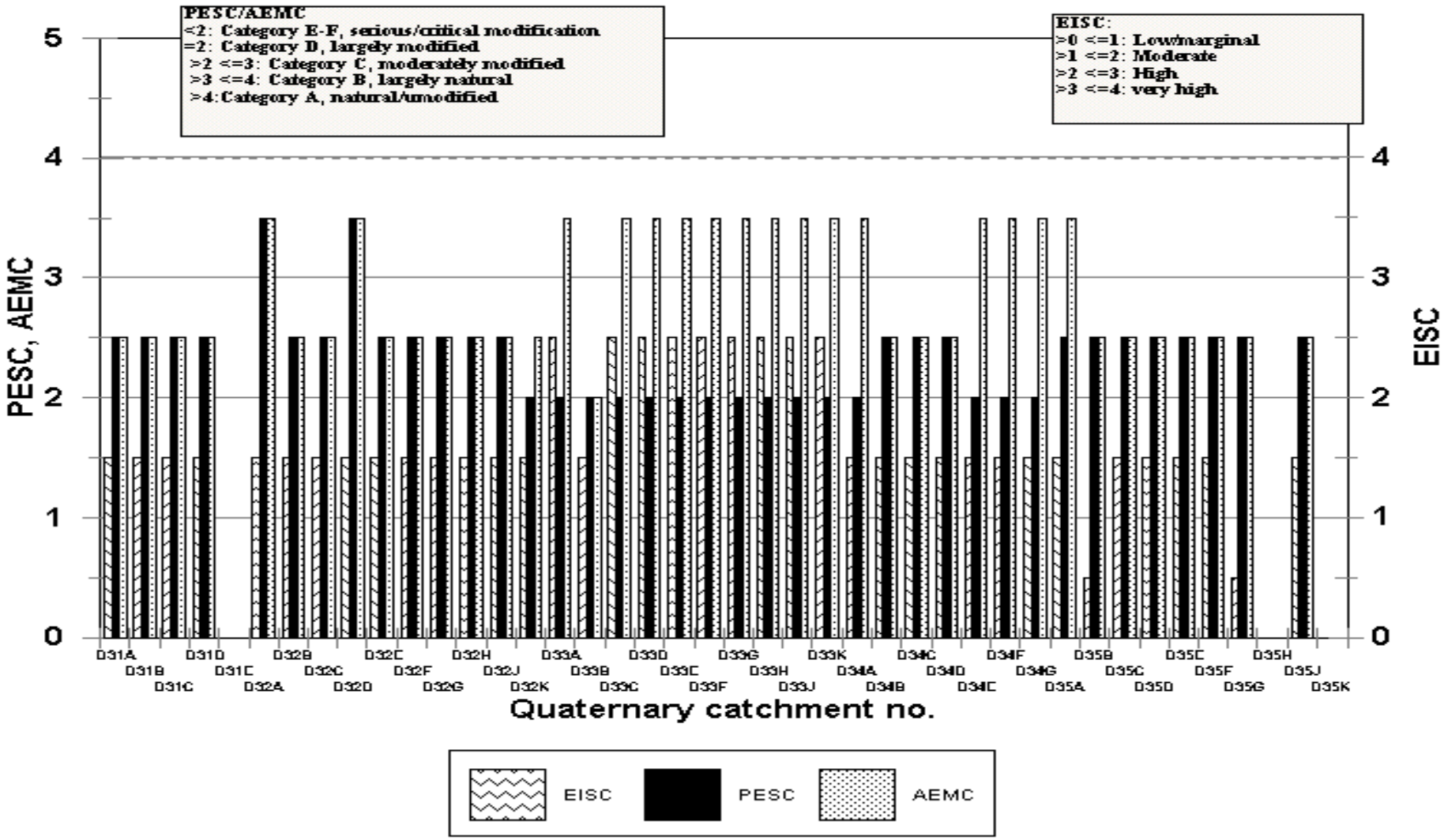


Fig.20: EISC, PESC & AEMC for D41A - D54G

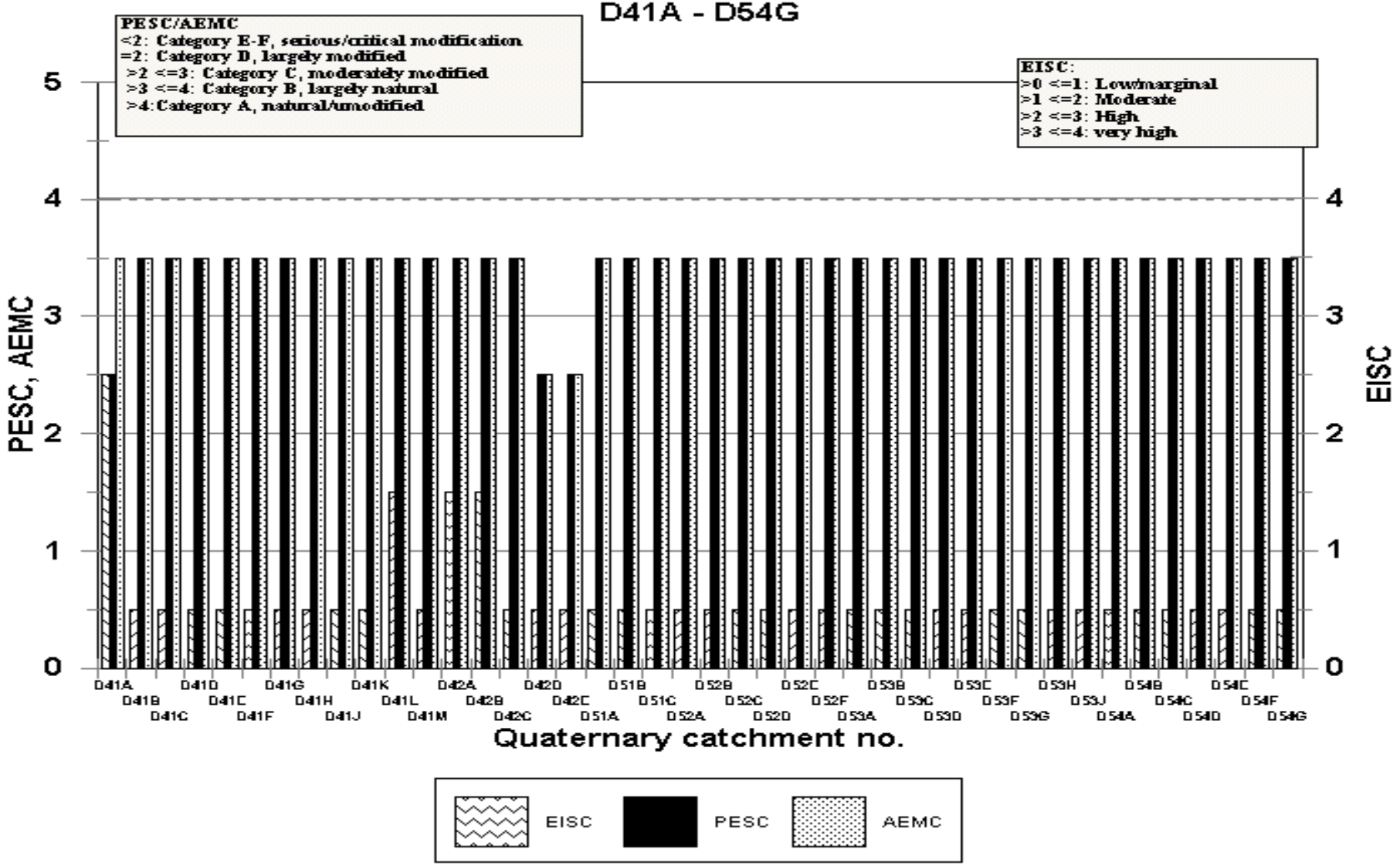


Fig.21: EISC, PESC & AEMC for D55A - D61M

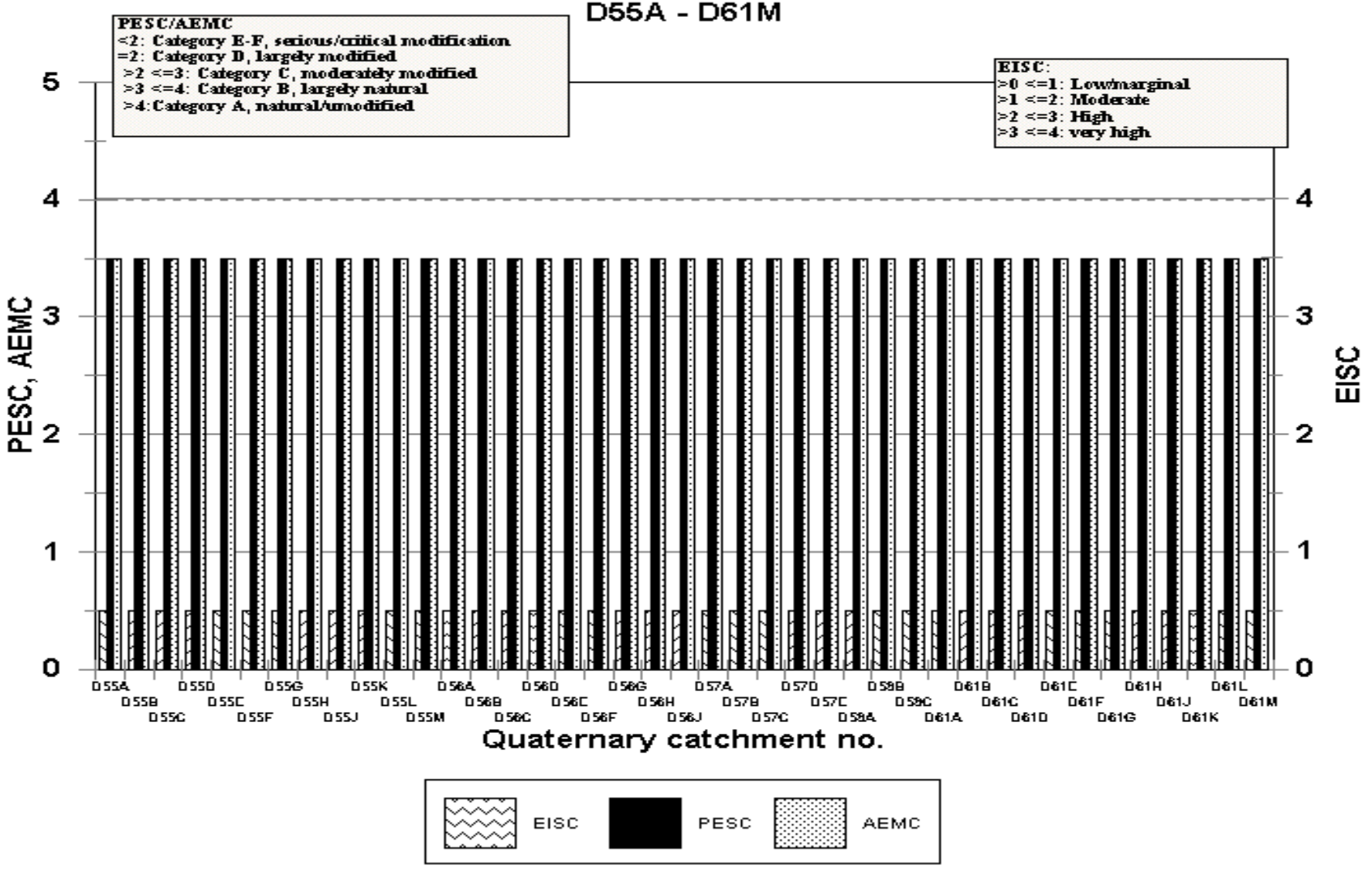


Fig.22: EISC, PESC & AEMC for D62A - D82L

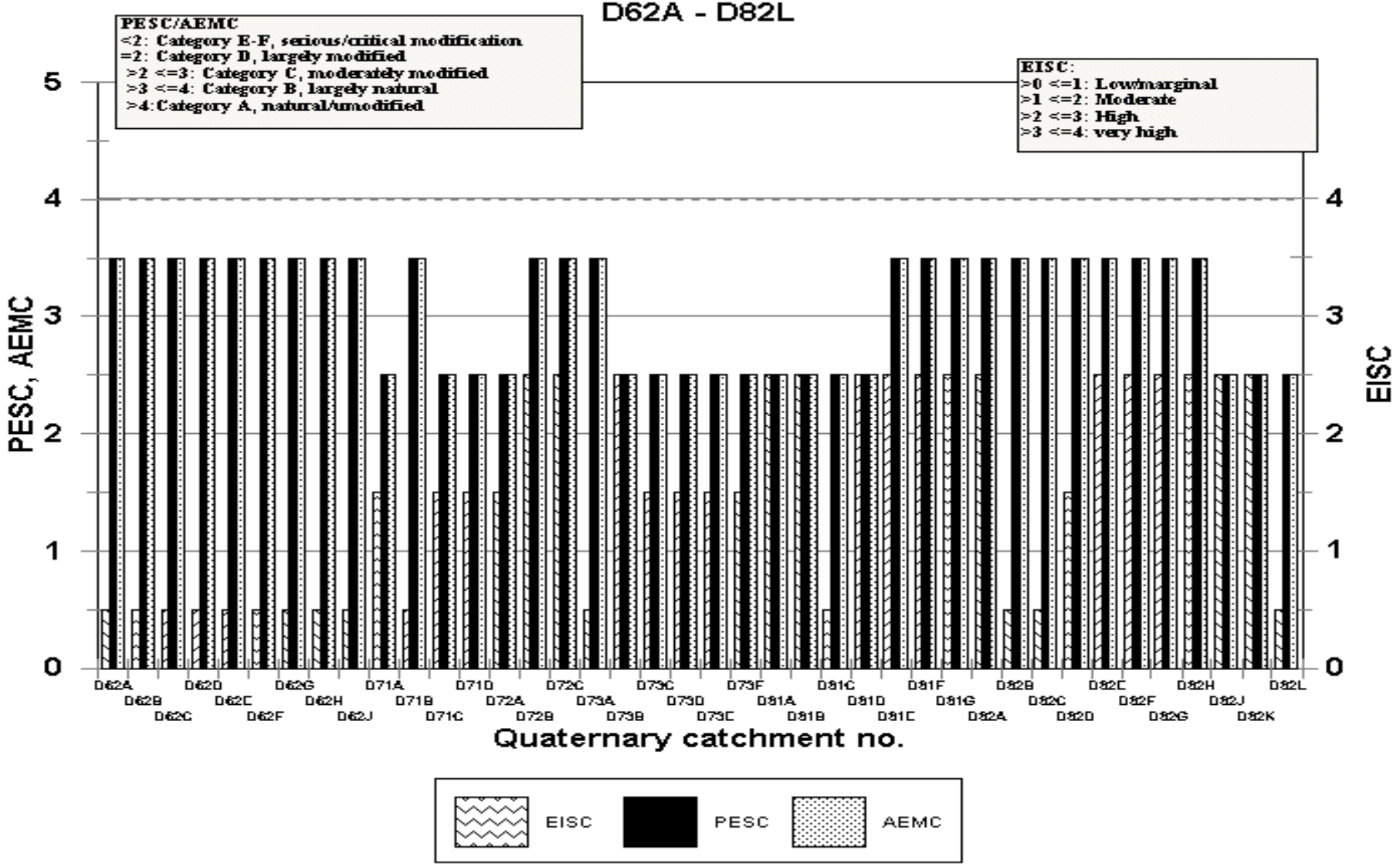


Table 5: Ratings for quaternary catchments of primary drainage E (Fig. 24 – 25).

QUAT.No.	PROVINCE	RIVERS	EISC	DEMC	PESC	BEST AEMC
E10A	WESTERN CAPE	Upper Olifants	HIGH	B: SMALL RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
E10B	WESTERN CAPE	Upper Olifants	HIGH	B: SMALL RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
E10C	WESTERN CAPE	Olifants River	VERY HIGH	A: NO HUMAN HAZARDS	A: UNMODIFIED, NATURAL	A: UNMODIFIED, NATURAL
E10D	WESTERN CAPE	Olifants, Visgat, up stream to Bulshoek	MODERATE	C: MODERATE RISK ALLOWED	D: LARGELY MODIFIED	D: LARGELY MODIFIED
E10E	WESTERN CAPE	Olifants, Visgat, up stream to Bulshoek	MODERATE	C: MODERATE RISK ALLOWED	D: LARGELY MODIFIED	D: LARGELY MODIFIED
E10F	WESTERN CAPE	Olifants, Visgat, up stream to Bulshoek	MODERATE	C: MODERATE RISK ALLOWED	D: LARGELY MODIFIED	D: LARGELY MODIFIED
E10G	WESTERN CAPE	Olifants, Visgat, up stream to Bulshoek	MODERATE	C: MODERATE RISK ALLOWED	D: LARGELY MODIFIED	D: LARGELY MODIFIED
E10H	WESTERN CAPE	Olifants, Visgat, up stream to Bulshoek	MODERATE	C: MODERATE RISK ALLOWED	D: LARGELY MODIFIED	D: LARGELY MODIFIED
E10J	WESTERN CAPE	Olifants, Visgat, up stream to Bulshoek	MODERATE	C: MODERATE RISK ALLOWED	D: LARGELY MODIFIED	D: LARGELY MODIFIED
E10K	WESTERN CAPE	Bulshoek to confluence with Doring	MODERATE	C: MODERATE RISK ALLOWED	D: LARGELY MODIFIED	D: LARGELY MODIFIED
E21A	WESTERN CAPE	Gruis, Groot, Ret	LOW	D: LARGE RISK ALLOWED	E - F: NOT AN ACCEPTABLE	E - F: NOT AN ACCEPTABLE
E21B	WESTERN CAPE	Gruis, Groot, Ret	LOW	D: LARGE RISK ALLOWED	E - F: NOT AN ACCEPTABLE	E - F: NOT AN ACCEPTABLE
E21C	WESTERN CAPE	Gruis, Groot, Ret	LOW	D: LARGE RISK ALLOWED	E - F: NOT AN ACCEPTABLE	E - F: NOT AN ACCEPTABLE
E21D	WESTERN CAPE	Gruis, Groot, Ret	LOW	D: LARGE RISK ALLOWED	E - F: NOT AN ACCEPTABLE	E - F: NOT AN ACCEPTABLE
E21E	WESTERN CAPE	Groot ,Maaitjies ,Tra-tra	LOW	D: LARGE RISK ALLOWED	B: LARGELY NATURAL	B: LARGELY NATURAL
E21F	WESTERN CAPE	Groot ,Maaitjies ,Tra-tra	LOW	D: LARGE RISK ALLOWED	B: LARGELY NATURAL	B: LARGELY NATURAL
E21G	WESTERN CAPE	Groot ,Maaitjies ,Tra-tra	LOW	D: LARGE RISK ALLOWED	B: LARGELY NATURAL	B: LARGELY NATURAL
E21H	WESTERN CAPE	Groot ,Maaitjies ,Tra-tra	LOW	D: LARGE RISK ALLOWED	B: LARGELY NATURAL	B: LARGELY NATURAL
E21J	WESTERN CAPE	Groot ,Maaitjies ,Tra-tra	LOW	D: LARGE RISK ALLOWED	B: LARGELY NATURAL	B: LARGELY NATURAL
E21K	WESTERN CAPE	Groot ,Maaitjies ,Tra-tra	LOW	D: LARGE RISK ALLOWED	B: LARGELY NATURAL	B: LARGELY NATURAL
E21L	WESTERN CAPE	Groot ,Maaitjies ,Tra-tra	LOW	D: LARGE RISK ALLOWED	B: LARGELY NATURAL	B: LARGELY NATURAL
E22A	WESTERN CAPE	upper Doring, Tanqua, Groot	LOW	D: LARGE RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL
E22B	WESTERN CAPE	upper Doring, Tanqua, Groot	LOW	D: LARGE RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL
E22C	WESTERN CAPE	upper Doring, Tanqua, Groot	LOW	D: LARGE RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL
E22D	WESTERN CAPE	upper Doring, Tanqua, Groot	LOW	D: LARGE RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL
E22E	WESTERN CAPE	upper Doring, Tanqua, Groot	LOW	D: LARGE RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL
E22F	WESTERN CAPE	upper Doring, Tanqua, Groot	LOW	D: LARGE RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL
E22G	WESTERN CAPE	Doring , Aspoot	VERY HIGH	A: NO HUMAN HAZARDS	C: MODERATELY MODIFIED	B: LARGELY NATURAL
E23A	WESTERN CAPE	upper Doring, Tanqua, Groot	LOW	D: LARGE RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL
E23B	WESTERN CAPE	upper Doring, Tanqua, Groot	LOW	D: LARGE RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL

QUAT.No.	PROVINCE	RIVERS	EISC	DEMC	PESC	BEST AEMC
E23C	WESTERN CAPE	upper Doring, Tanqua, Groot	LOW	D: LARGE RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL
E23D	WESTERN CAPE	upper Doring, Tanqua, Groot	LOW	D: LARGE RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL
E23E	WESTERN CAPE	upper Doring, Tanqua, Groot	LOW	D: LARGE RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL
E23F	WESTERN CAPE	upper Doring, Tanqua, Groot	LOW	D: LARGE RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL
E23G	WESTERN CAPE	upper Doring, Tanqua, Groot	LOW	D: LARGE RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL
E23H	WESTERN CAPE	upper Doring, Tanqua, Groot	LOW	D: LARGE RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL
E23J	WESTERN CAPE	upper Doring, Tanqua, Groot	LOW	D: LARGE RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL
E23K	WESTERN CAPE	upper Doring, Tanqua, Groot	LOW	D: LARGE RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL
E24A	WESTERN CAPE	Groot ,Maaitjies ,Tra-tra	LOW	D: LARGE RISK ALLOWED	B: LARGELY NATURAL	B: LARGELY NATURAL
E24B	WESTERN CAPE	Groot ,Maaitjies ,Tra-tra	LOW	D: LARGE RISK ALLOWED	B: LARGELY NATURAL	B: LARGELY NATURAL
E24C	WESTERN CAPE	upper Doring, Tanqua, Groot	LOW	D: LARGE RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL
E24D	WESTERN CAPE	upper Doring, Tanqua, Groot	LOW	D: LARGE RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL
E24E	WESTERN CAPE	upper Doring, Tanqua, Groot	LOW	D: LARGE RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL
E24F	WESTERN CAPE	upper Doring, Tanqua, Groot	LOW	D: LARGE RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL
E24G	WESTERN CAPE	upper Doring, Tanqua, Groot	LOW	D: LARGE RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL
E24H	WESTERN CAPE	Doring from Elandsbaai	HIGH	B: SMALL RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL
E24J	WESTERN CAPE	Doring from Elandsbaai	HIGH	B: SMALL RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL
E24K	WESTERN CAPE	upper Doring, Tanqua, Groot	LOW	D: LARGE RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL
E24L	WESTERN CAPE	Doring from Elandsbaai	HIGH	B: SMALL RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL
E24M	WESTERN CAPE	Doring from Elandsbaai	HIGH	B: SMALL RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL
E31A	WESTERN CAPE	endorheic	INVALID ENTRIES	WRONG ENTRY	E - F: NOT AN ACCEPTABLE	E - F: > E NOT ATTAINABLE IN 5 YR - USE D AS DEFAULT
E31B	WESTERN CAPE	Kromme	MODERATE	C: MODERATE RISK ALLOWED	B: LARGELY NATURAL	B: LARGELY NATURAL
E31C	WESTERN CAPE	Kromme	MODERATE	C: MODERATE RISK ALLOWED	B: LARGELY NATURAL	B: LARGELY NATURAL
E31D	WESTERN CAPE	Sout, Handhaaf (Knersvlakte area)	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL
E31E	WESTERN CAPE	Sout, Handhaaf (Knersvlakte area)	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL
E31F	WESTERN CAPE	Sout, Handhaaf (Knersvlakte area)	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL
E31G	WESTERN CAPE	Sout, Handhaaf (Knersvlakte area)	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL
E31H	WESTERN CAPE	Sout, Handhaaf (Knersvlakte area)	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL

QUAT.No.	PROVINCE	RIVERS	EISC	DEMC	PESC	BEST AEMC
E32A	WESTERN CAPE	Kromme	MODERATE	C: MODERATE RISK ALLOWED	B: LARGELY NATURAL	B: LARGELY NATURAL
E32B	WESTERN CAPE	Sout, Handhaaf (Knersvlakte area)	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL
E32C	WESTERN CAPE	Sout, Handhaaf (Knersvlakte area)	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL
E32D	WESTERN CAPE	Sout, Handhaaf (Knersvlakte area)	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL
E32E	WESTERN CAPE	Sout, Handhaaf (Knersvlakte area)	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL
E33A	WESTERN CAPE	Sout, Handhaaf (Knersvlakte area)	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL
E33B	WESTERN CAPE	Sout, Handhaaf (Knersvlakte area)	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL
E33C	WESTERN CAPE	Sout, Handhaaf (Knersvlakte area)	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL
E33D	WESTERN CAPE	Sout, Handhaaf (Knersvlakte area)	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL
E33E	WESTERN CAPE	Sout, Handhaaf (Knersvlakte area)	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL
E33F	WESTERN CAPE	Olifants confluence to estuary	MODERATE	C: MODERATE RISK ALLOWED	D: LARGELY MODIFIED	C: MODERATELY MODIFIED
E33G	WESTERN CAPE	Olifants confluence to estuary	MODERATE	C: MODERATE RISK ALLOWED	D: LARGELY MODIFIED	C: MODERATELY MODIFIED
E33H	WESTERN CAPE	Olifants confluence to estuary	MODERATE	C: MODERATE RISK ALLOWED	D: LARGELY MODIFIED	C: MODERATELY MODIFIED
E40A	WESTERN CAPE	Oorlogskloof and upper Oorlogskloof	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
E40B	WESTERN CAPE	Oorlogskloof and upper Oorlogskloof	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
E40C	WESTERN CAPE	Lower Oorlogskloof, Koebee	HIGH	B: SMALL RISK ALLOWED	B: LARGELY NATURAL	B: LARGELY NATURAL
E40D	WESTERN CAPE	Lower Oorlogskloof, Koebee	HIGH	B: SMALL RISK ALLOWED	B: LARGELY NATURAL	B: LARGELY NATURAL

Fig.23: EISC, PESC & AEMC for E10A - E23K

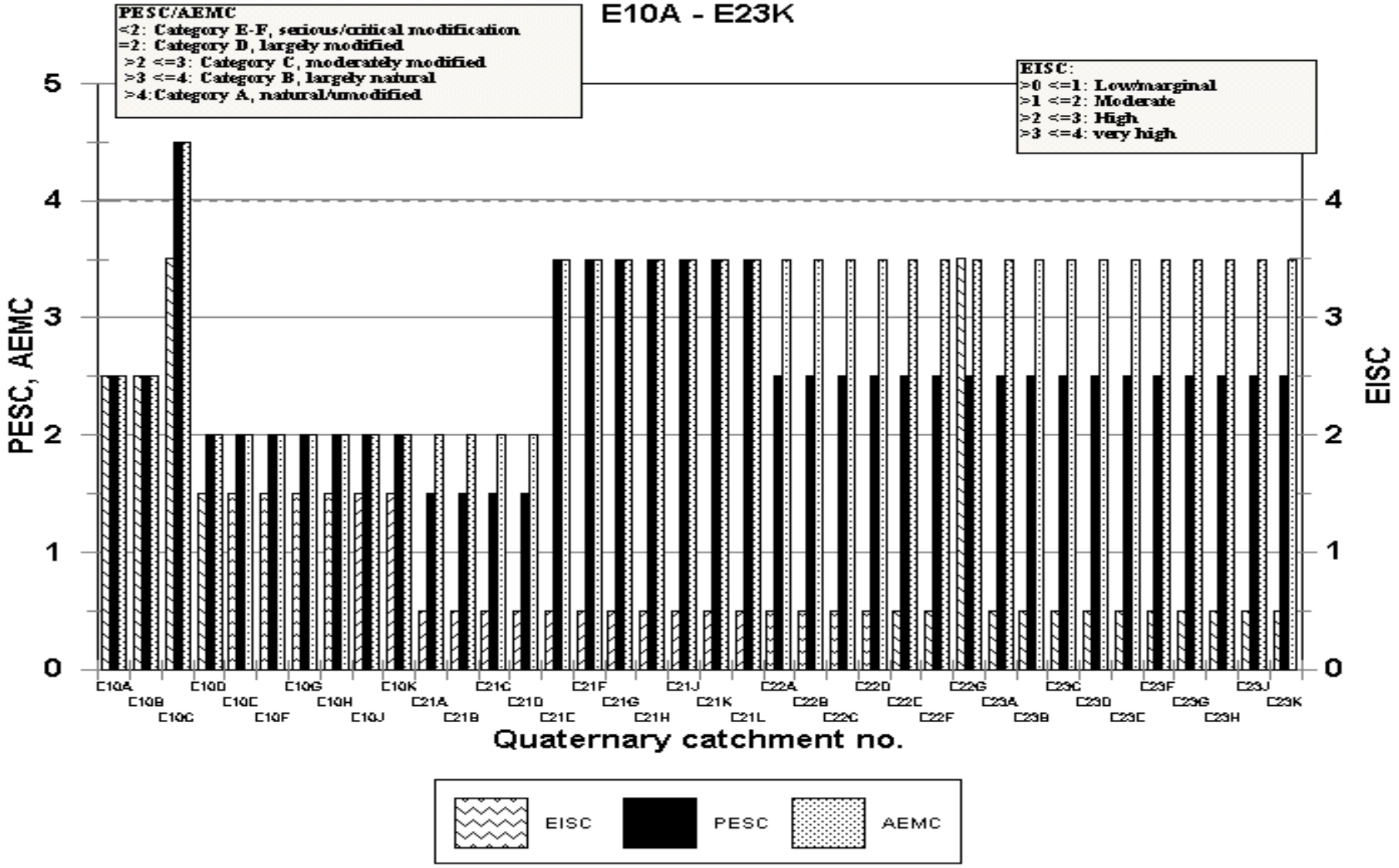


Fig.24: EISC, PESC & AEMC for E24A - E40D

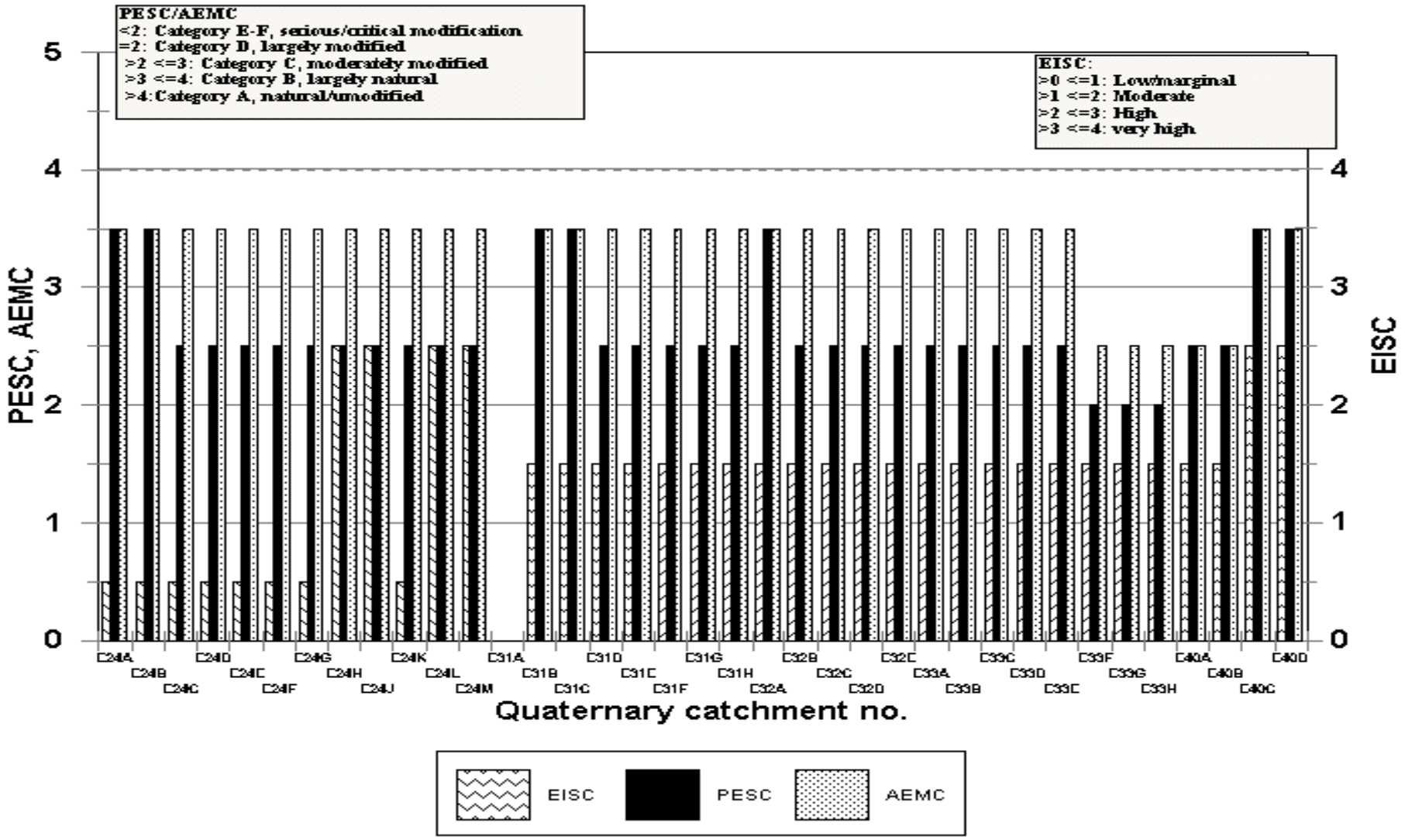


Table 6: Ratings for quaternary catchments of primary drainage F (Fig. 26).

QUAT.No.	PROVINCE	RIVERS	EISC	DEMC	PESC	BEST AEMC
F10A	NORTHERN CAPE	gaigas	LOW	D: LARGE RISK ALLOWED	B: LARGELY NATURAL	A: UNMODIFIED, NATURAL
F10B	NORTHERN CAPE	holgat	LOW	D: LARGE RISK ALLOWED	B: LARGELY NATURAL	A: UNMODIFIED, NATURAL
F10C	NORTHERN CAPE	holgat	LOW	D: LARGE RISK ALLOWED	B: LARGELY NATURAL	A: UNMODIFIED, NATURAL
F20A	NORTHERN CAPE		LOW	D: LARGE RISK ALLOWED	B: LARGELY NATURAL	B: LARGELY NATURAL
F20B	NORTHERN CAPE		LOW	D: LARGE RISK ALLOWED	B: LARGELY NATURAL	A: UNMODIFIED, NATURAL
F20C	NORTHERN CAPE	kamma r	LOW	D: LARGE RISK ALLOWED	B: LARGELY NATURAL	A: UNMODIFIED, NATURAL
F20D	NORTHERN CAPE		LOW	D: LARGE RISK ALLOWED	B: LARGELY NATURAL	A: UNMODIFIED, NATURAL
F20E	NORTHERN CAPE		LOW	D: LARGE RISK ALLOWED	B: LARGELY NATURAL	A: UNMODIFIED, NATURAL
F30A	NORTHERN CAPE	BUFFELSRIVIER	LOW	D: LARGE RISK ALLOWED	B: LARGELY NATURAL	B: LARGELY NATURAL
F30B	NORTHERN CAPE	BRAK RIVER	LOW	D: LARGE RISK ALLOWED	B: LARGELY NATURAL	B: LARGELY NATURAL
F30C	NORTHERN CAPE	BUFFELS RIVER	LOW	D: LARGE RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL
F30D	NORTHERN CAPE	BUFFELS RIVER	LOW	D: LARGE RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL
F30E	NORTHERN CAPE	SKAAP RIVER	LOW	D: LARGE RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL
F30F	NORTHERN CAPE	BUFFELS RIVER	LOW	D: LARGE RISK ALLOWED	B: LARGELY NATURAL	A: UNMODIFIED, NATURAL
F30G	NORTHERN CAPE	BUFFELS RIVER	LOW	D: LARGE RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL
F40A	WESTERN CAPE	Groen, Sout, Swartdoring	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL
F40B	WESTERN CAPE	Groen, Sout, Swartdoring	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL
F40C	WESTERN CAPE	Groen, Sout, Swartdoring	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL
F40D	WESTERN CAPE	Groen, Sout, Swartdoring	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL
F40E	WESTERN CAPE	Groen, Sout, Swartdoring	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL
F40F	WESTERN CAPE	Groen, Sout, Swartdoring	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL
F40G	WESTERN CAPE	Groen, Sout, Swartdoring	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL
F40H	WESTERN CAPE	Groen, Sout, Swartdoring	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL
F50A	WESTERN CAPE	Groen, Sout, Swartdoring	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL
F50B	WESTERN CAPE	Groen, Sout, Swartdoring	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL
F50C	WESTERN CAPE	Groen, Sout, Swartdoring	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL
F50D	WESTERN CAPE	Groen, Sout, Swartdoring	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL
F50E	WESTERN CAPE	Groen, Sout, Swartdoring	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL
F50F	WESTERN CAPE	Groen, Sout, Swartdoring	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL
F50G	WESTERN CAPE	Groen, Sout, Swartdoring	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL
F60A	WESTERN CAPE	Groen, Sout, Swartdoring	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL
F60B	WESTERN CAPE	Groen, Sout, Swartdoring	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL
F60C	WESTERN CAPE	Groen, Sout, Swartdoring	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL
F60D	WESTERN CAPE	Groen, Sout, Swartdoring	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL
F60E	WESTERN CAPE	Groen, Sout, Swartdoring	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL

Fig.25: EISC, PESC & AEMC for F10A - F60E

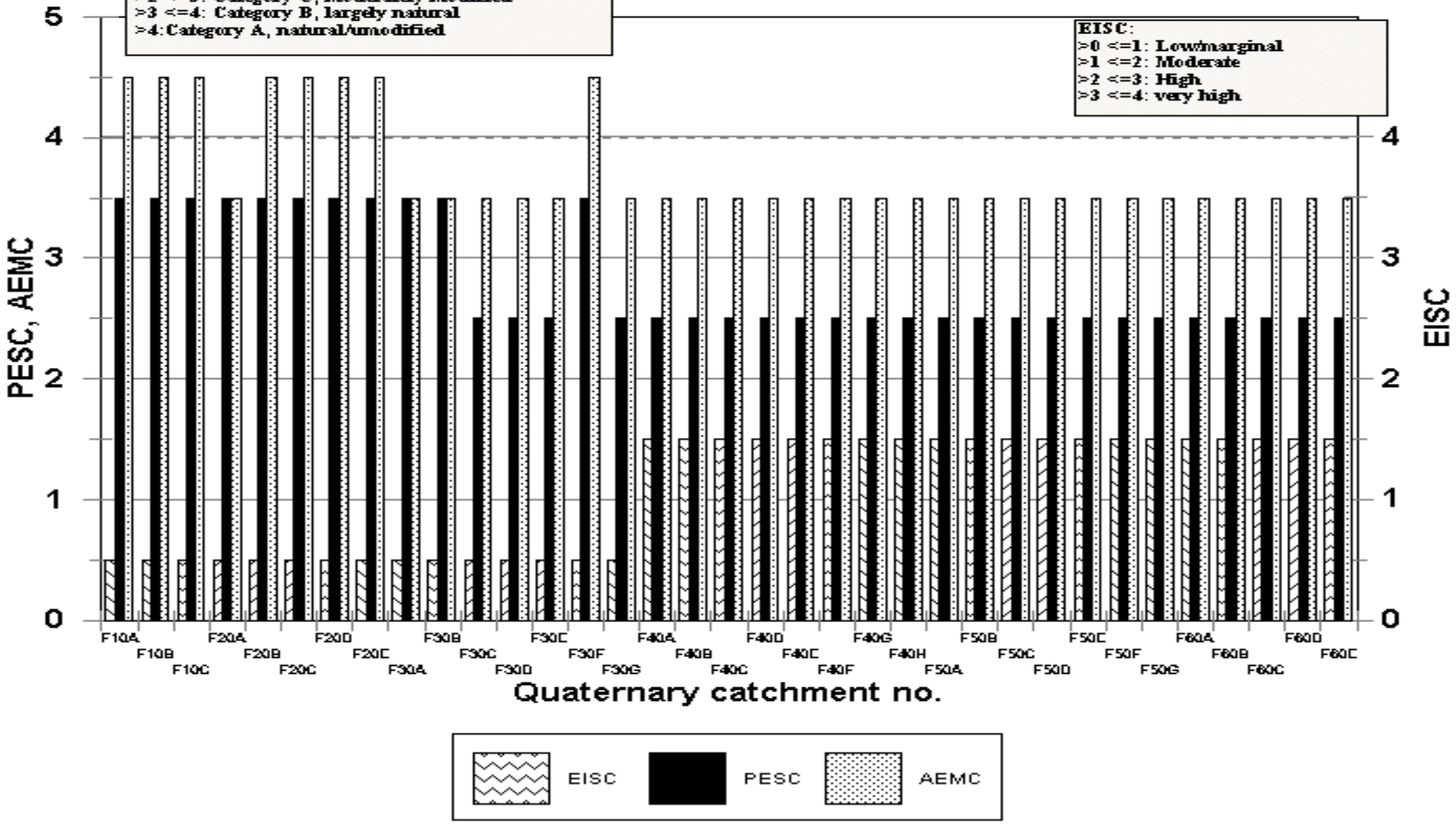
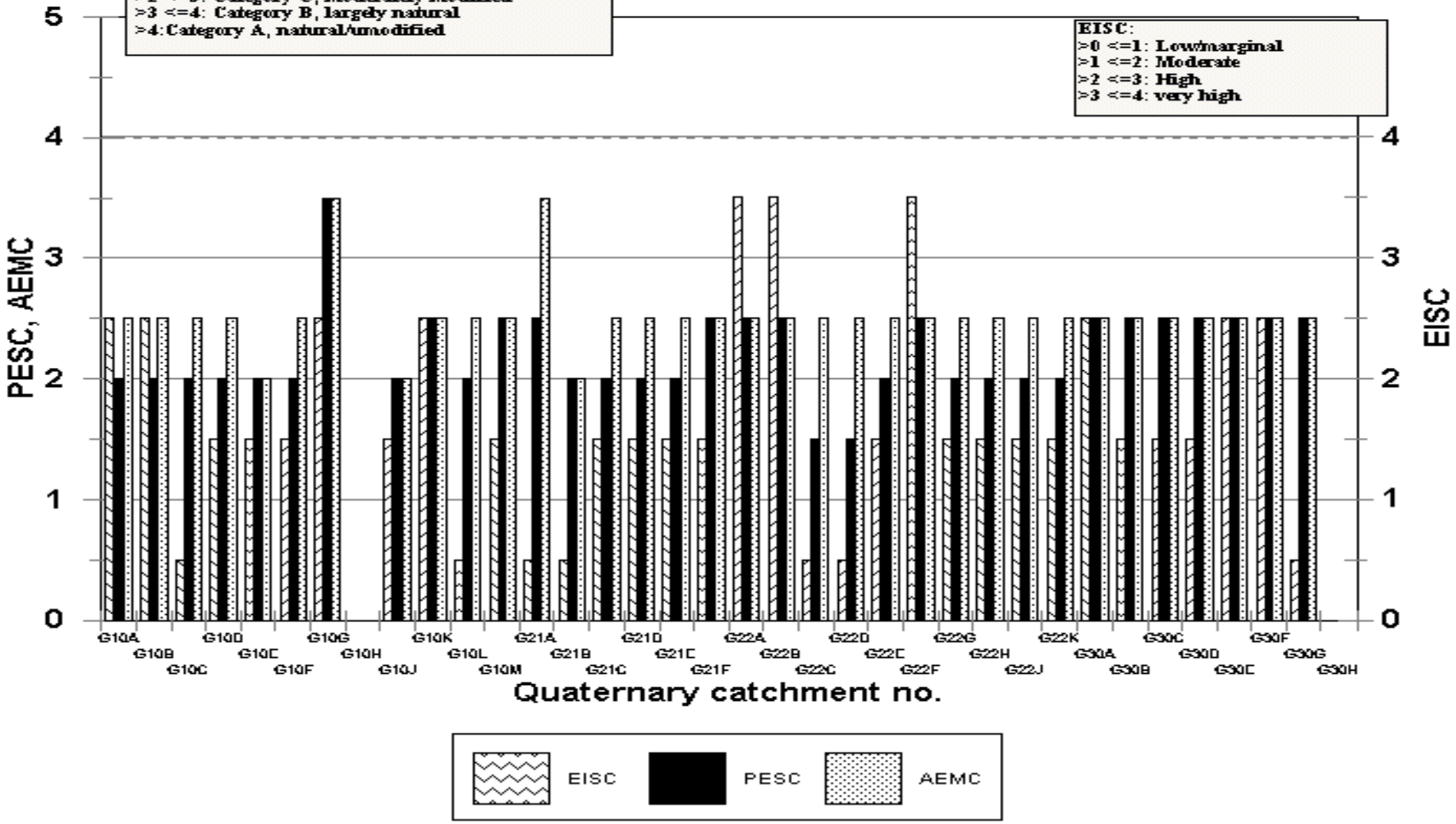


Table 7: Ratings for quaternary catchments of primary drainage G (Fig. 27 - 28).

QUAT.No.	PROVINCE	RIVERS	EISC	DEMC	PESC	BEST AEMC
G10A	WESTERN CAPE	Upper Berg , Franschoek	HIGH	B: SMALL RISK ALLOWED	D: LARGELY MODIFIED	C: MODERATELY MODIFIED
G10B	WESTERN CAPE	Upper Berg , Franschoek	HIGH	B: SMALL RISK ALLOWED	D: LARGELY MODIFIED	C: MODERATELY MODIFIED
G10C	WESTERN CAPE	Breede	LOW	D: LARGE RISK ALLOWED	D: LARGELY MODIFIED	C: MODERATELY MODIFIED
G10D	WESTERN CAPE	Berg	MODERATE	C: MODERATE RISK ALLOWED	D: LARGELY MODIFIED	C: MODERATELY MODIFIED
G10E	WESTERN CAPE	Kleinberg ,Boontjies	MODERATE	C: MODERATE RISK ALLOWED	D: LARGELY MODIFIED	D: LARGELY MODIFIED
G10F	WESTERN CAPE	Berg	MODERATE	C: MODERATE RISK ALLOWED	D: LARGELY MODIFIED	C: MODERATELY MODIFIED
G10G	WESTERN CAPE	Twenty-Four rivers	HIGH	B: SMALL RISK ALLOWED	B: LARGELY NATURAL	B: LARGELY NATURAL
G10H	**WESTERN CAPE**	**No rivers - (but indicated with river in WR90?)**	INVALID ENTRIES	**WRONG ENTRY**	**E - F: NOT AN ACCEPTABLE**	**E - F: > E NOT ATTAINABLE IN 5 YR - USE D AS DEFAULT**
G10J	WESTERN CAPE	Berg	MODERATE	C: MODERATE RISK ALLOWED	D: LARGELY MODIFIED	D: LARGELY MODIFIED
G10K	WESTERN CAPE	Berg	HIGH	B: SMALL RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
G10L	WESTERN CAPE	Groen	LOW	D: LARGE RISK ALLOWED	D: LARGELY MODIFIED	C: MODERATELY MODIFIED
G10M	WESTERN CAPE	Verlorenvlei	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
G21A	WESTERN CAPE	Modder, Dwars	LOW	D: LARGE RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL
G21B	WESTERN CAPE	Sout	LOW	D: LARGE RISK ALLOWED	D: LARGELY MODIFIED	D: LARGELY MODIFIED
G21C	WESTERN CAPE	Diep	MODERATE	C: MODERATE RISK ALLOWED	D: LARGELY MODIFIED	C: MODERATELY MODIFIED
G21D	WESTERN CAPE	Diep	MODERATE	C: MODERATE RISK ALLOWED	D: LARGELY MODIFIED	C: MODERATELY MODIFIED
G21E	WESTERN CAPE	Diep	MODERATE	C: MODERATE RISK ALLOWED	D: LARGELY MODIFIED	C: MODERATELY MODIFIED
G21F	WESTERN CAPE	Diep	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
G22A	WESTERN CAPE	DISA, SILVERMINE	VERY HIGH	A: NO HUMAN HAZARDS	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
G22B	WESTERN CAPE	DISA, SILVERMINE	VERY HIGH	A: NO HUMAN HAZARDS	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
G22C	WESTERN CAPE	Liesbeek< SAnd Black	LOW	D: LARGE RISK ALLOWED	E - F: NOT AN ACCEPTABLE	C: MODERATELY MODIFIED
G22D	WESTERN CAPE	Liesbeek< SAnd Black	LOW	D: LARGE RISK ALLOWED	E - F: NOT AN ACCEPTABLE	C: MODERATELY MODIFIED
G22E	WESTERN CAPE	Eerste , Lourens , Kuils	MODERATE	C: MODERATE RISK ALLOWED	D: LARGELY MODIFIED	C: MODERATELY MODIFIED
G22F	WESTERN CAPE	Upper Eerste	VERY HIGH	A: NO HUMAN HAZARDS	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
G22G	WESTERN CAPE	Eerste , Lourens , Kuils	MODERATE	C: MODERATE RISK ALLOWED	D: LARGELY MODIFIED	C: MODERATELY MODIFIED
G22H	WESTERN CAPE	Eerste , Lourens , Kuils	MODERATE	C: MODERATE RISK ALLOWED	D: LARGELY MODIFIED	C: MODERATELY MODIFIED
G22J	WESTERN CAPE	Eerste , Lourens , Kuils	MODERATE	C: MODERATE RISK ALLOWED	D: LARGELY MODIFIED	C: MODERATELY MODIFIED
G22K	WESTERN CAPE	Eerste , Lourens , Kuils	MODERATE	C: MODERATE RISK ALLOWED	D: LARGELY MODIFIED	C: MODERATELY MODIFIED
G30A	WESTERN CAPE	Graaff Water, Verlorenvlei	HIGH	B: SMALL RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
G30B	WESTERN CAPE	Verlorenvlei	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
G30C	WESTERN CAPE	Verlorenvlei	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
G30D	WESTERN CAPE	Verlorenvlei	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
G30E	WESTERN CAPE	Graaff Water, Verlorenvlei	HIGH	B: SMALL RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
G30F	WESTERN CAPE	Graaff Water, Verlorenvlei	HIGH	B: SMALL RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
G30G	WESTERN CAPE	Jakkals	LOW	D: LARGE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
G30H	WESTERN CAPE	endorheic	INVALID ENTRIES	WRONG ENTRY	E - F: NOT AN ACCEPTABLE	E - F: > E NOT ATTAINABLE IN 5 YR - USE D AS DEFAULT
G40A	WESTERN CAPE	Palmiet ,Rooi els ,Steenbras	VERY HIGH	A: NO HUMAN HAZARDS	C: MODERATELY MODIFIED	B: LARGELY NATURAL

QUAT.No.	PROVINCE	RIVERS	EISC	DEMC	PESC	BEST AEMC
G40B	WESTERN CAPE	Palmiet ,Rooi els ,Steenbras	VERY HIGH	A: NO HUMAN HAZARDS	C: MODERATELY MODIFIED	B: LARGELY NATURAL
G40C	WESTERN CAPE	Upper Palmiet	MODERATE	C: MODERATE RISK ALLOWED	D: LARGELY MODIFIED	C: MODERATELY MODIFIED
G40D	WESTERN CAPE	Palmiet ,Rooi els ,Steenbras	VERY HIGH	A: NO HUMAN HAZARDS	C: MODERATELY MODIFIED	B: LARGELY NATURAL
G40E	WESTERN CAPE	Bot	MODERATE	C: MODERATE RISK ALLOWED	D: LARGELY MODIFIED	C: MODERATELY MODIFIED
G40F	WESTERN CAPE	Bot	MODERATE	C: MODERATE RISK ALLOWED	D: LARGELY MODIFIED	C: MODERATELY MODIFIED
G40G	WESTERN CAPE	Bot	MODERATE	C: MODERATE RISK ALLOWED	D: LARGELY MODIFIED	C: MODERATELY MODIFIED
G40H	WESTERN CAPE	Klein and Onrus	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
G40J	WESTERN CAPE	Klein and Onrus	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
G40K	WESTERN CAPE	Klein and Onrus	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
G40L	WESTERN CAPE	Klein and Onrus	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
G40M	WESTERN CAPE	Steenberg , Uilenkraal,	HIGH	B: SMALL RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
G50A	WESTERN CAPE	Steenberg , Uilenkraal,	HIGH	B: SMALL RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
G50B	WESTERN CAPE	Steenberg , Uilenkraal,	HIGH	B: SMALL RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
G50C	WESTERN CAPE	Steenberg , Uilenkraal,	HIGH	B: SMALL RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
G50D	WESTERN CAPE	Steenberg , Uilenkraal,	HIGH	B: SMALL RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
G50E	WESTERN CAPE	Steenberg , Uilenkraal,	HIGH	B: SMALL RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
G50F	WESTERN CAPE	Steenberg , Uilenkraal,	HIGH	B: SMALL RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
G50G	WESTERN CAPE	Salt De Hoop	HIGH	B: SMALL RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL
G50H	WESTERN CAPE	Salt De Hoop	HIGH	B: SMALL RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL
G50J	WESTERN CAPE	endorheic - no rivers	INVALID ENTRIES	WRONG ENTRY	E - F: NOT AN ACCEPTABLE	E - F: > E NOT ATTAINABLE IN 5 YR - USE D AS DEFAULT
G50K	WESTERN CAPE	Salt De Hoop	HIGH	B: SMALL RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL

Fig.26: EISC, PESC & AEMC for G10A - G30H



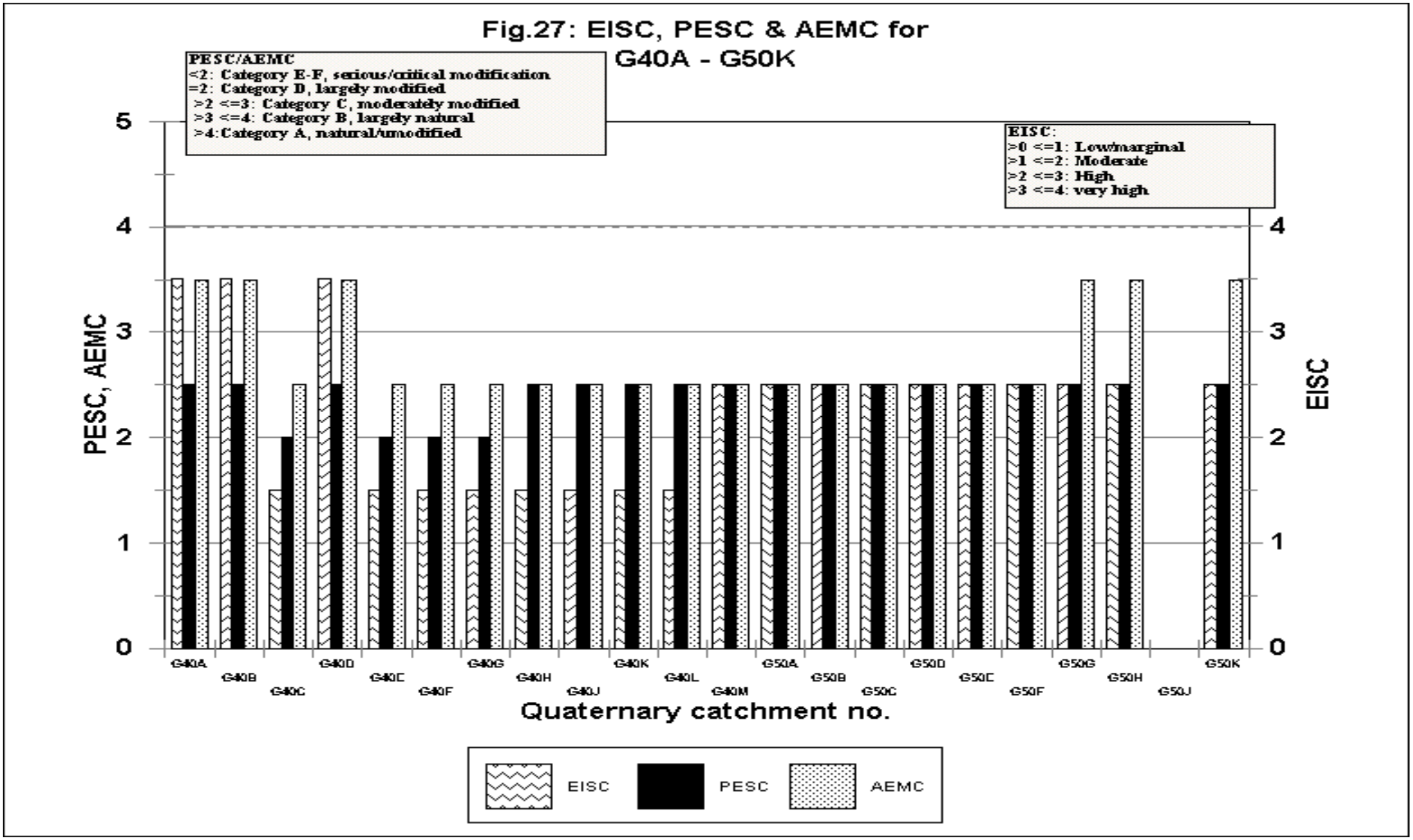


Fig.27: EISC, PESC & AEMC for G40A - G50K
PESC/AEMC
<2: Category E-F, serious/critical modification
=2: Category D, largely modified
>2 <=3: Category C, moderately modified
>3 <=4: Category B, largely natural
>4:Category A, natural/unmodified
EISC:
>0 <=1: Low/marginal
>1 <=2: Moderate
>2 <=3: High
>3 <=4: very high
PESC, AEMC
EISC
0
1
2
3
4
5
G40A
G40B
G40C
G40D
G40E
G40F
G40G
G40H
G40J
G40K
G40L
G40M
G50A
G50B
G50C
G50D
G50E
G50F
G50G
G50H
G50J
G50K
Quaternary catchment no.
EISC
PESC
AEMC

Table 8: Ratings for quaternary catchments of primary drainage H (Fig. 29 – 30).

QUAT.No.	PROVINCE	RIVERS	EISC	DEMC	PESC	BEST AEMC
H10A	WESTERN CAPE	Titus, Koekedoer, Dwars	MODERATE	C: MODERATE RISK ALLOWED	D: LARGELY MODIFIED	D: LARGELY MODIFIED
H10B	WESTERN CAPE	Titus, Koekedoer, Dwars	MODERATE	C: MODERATE RISK ALLOWED	D: LARGELY MODIFIED	D: LARGELY MODIFIED
H10C	WESTERN CAPE	Titus, Koekedoer, Dwars	MODERATE	C: MODERATE RISK ALLOWED	D: LARGELY MODIFIED	D: LARGELY MODIFIED
H10D	WESTERN CAPE	Mitchells pass	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
H10E	WESTERN CAPE	Upper Wit	VERY HIGH	A: NO HUMAN HAZARDS	A: UNMODIFIED, NATURAL	A: UNMODIFIED, NATURAL
H10F	WESTERN CAPE	Breede, (lower Wit and Slanghoek)	MODERATE	C: MODERATE RISK ALLOWED	D: LARGELY MODIFIED	D: LARGELY MODIFIED
H10G	WESTERN CAPE	Breede, (lower Wit and Slanghoek)	MODERATE	C: MODERATE RISK ALLOWED	D: LARGELY MODIFIED	D: LARGELY MODIFIED
H10H	WESTERN CAPE	Breede	HIGH	B: SMALL RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
H10J	WESTERN CAPE	Holsloot, Moelenaars	VERY HIGH	A: NO HUMAN HAZARDS	C: MODERATELY MODIFIED	B: LARGELY NATURAL
H10K	WESTERN CAPE	Holsloot, Moelenaars	VERY HIGH	A: NO HUMAN HAZARDS	C: MODERATELY MODIFIED	B: LARGELY NATURAL
H10L	WESTERN CAPE	Breede	HIGH	B: SMALL RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
H20A	WESTERN CAPE	Hex	MODERATE	C: MODERATE RISK ALLOWED	D: LARGELY MODIFIED	D: LARGELY MODIFIED
H20B	WESTERN CAPE	Hex	MODERATE	C: MODERATE RISK ALLOWED	D: LARGELY MODIFIED	D: LARGELY MODIFIED
H20C	WESTERN CAPE	Hex	MODERATE	C: MODERATE RISK ALLOWED	D: LARGELY MODIFIED	D: LARGELY MODIFIED
H20D	WESTERN CAPE	Hex	MODERATE	C: MODERATE RISK ALLOWED	D: LARGELY MODIFIED	D: LARGELY MODIFIED
H20E	WESTERN CAPE	Hex	MODERATE	C: MODERATE RISK ALLOWED	D: LARGELY MODIFIED	D: LARGELY MODIFIED
H20F	WESTERN CAPE	Hex	MODERATE	C: MODERATE RISK ALLOWED	D: LARGELY MODIFIED	D: LARGELY MODIFIED
H20G	WESTERN CAPE	Hex	MODERATE	C: MODERATE RISK ALLOWED	D: LARGELY MODIFIED	D: LARGELY MODIFIED
H20H	WESTERN CAPE	Hex	MODERATE	C: MODERATE RISK ALLOWED	D: LARGELY MODIFIED	D: LARGELY MODIFIED
H30A	WESTERN CAPE	Koggmanskloof	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
H30B	WESTERN CAPE	Koggmanskloof	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
H30C	WESTERN CAPE	Koggmanskloof	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
H30D	WESTERN CAPE	Koggmanskloof	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
H30E	WESTERN CAPE	Lower Koggmanskloof	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
H40A	WESTERN CAPE	Koggmanskloof	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
H40B	WESTERN CAPE	Koggmanskloof	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
H40C	WESTERN CAPE	Breede	HIGH	B: SMALL RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
H40D	WESTERN CAPE	Breede	HIGH	B: SMALL RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
H40E	WESTERN CAPE	Breede	HIGH	B: SMALL RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
H40F	WESTERN CAPE	Breede	MODERATE	C: MODERATE RISK ALLOWED	D: LARGELY MODIFIED	C: MODERATELY MODIFIED
H40G	WESTERN CAPE	Breede	MODERATE	C: MODERATE RISK ALLOWED	D: LARGELY MODIFIED	C: MODERATELY MODIFIED
H40H	WESTERN CAPE	Breede	MODERATE	C: MODERATE RISK ALLOWED	D: LARGELY MODIFIED	C: MODERATELY MODIFIED
H40J	WESTERN CAPE	Breede	MODERATE	C: MODERATE RISK ALLOWED	D: LARGELY MODIFIED	C: MODERATELY MODIFIED
H40K	WESTERN CAPE	Breede	MODERATE	C: MODERATE RISK ALLOWED	D: LARGELY MODIFIED	C: MODERATELY MODIFIED
H40L	WESTERN CAPE	Breede	MODERATE	C: MODERATE RISK ALLOWED	D: LARGELY MODIFIED	C: MODERATELY MODIFIED
H50A	WESTERN CAPE	Breede, from Bonnievale to downstream of Riviersonderend River	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
H50B	WESTERN CAPE	Breede, from Bonnievale to downstream of Riviersonderend River	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
H60A	WESTERN CAPE	Riviersonderend	HIGH	B: SMALL RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
H60B	WESTERN CAPE	Riviersonderend	HIGH	B: SMALL RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
H60C	WESTERN CAPE	Riviersonderend	HIGH	B: SMALL RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED

QUAT.No.	PROVINCE	RIVERS	EISC	DEMC	PESC	BEST AEMC
H60D	WESTERN CAPE	Riviersonderend	HIGH	B: SMALL RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
H60E	WESTERN CAPE	Riviersonderend	HIGH	B: SMALL RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
H60F	WESTERN CAPE	Riviersonderend	HIGH	B: SMALL RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
H60G	WESTERN CAPE	Riviersonderend	HIGH	B: SMALL RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
H60H	WESTERN CAPE	Riviersonderend	HIGH	B: SMALL RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
H60J	WESTERN CAPE	Riviersonderend River Upto conference	HIGH	B: SMALL RISK ALLOWED	D: LARGELY MODIFIED	C: MODERATELY MODIFIED
H60K	WESTERN CAPE	Riviersonderend River Upto conference	HIGH	B: SMALL RISK ALLOWED	D: LARGELY MODIFIED	C: MODERATELY MODIFIED
H60L	WESTERN CAPE	Riviersonderend River Upto conference	HIGH	B: SMALL RISK ALLOWED	D: LARGELY MODIFIED	C: MODERATELY MODIFIED
H70A	WESTERN CAPE	Breede, from Bonnievale to downstream of Riviersonderend River	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
H70B	WESTERN CAPE	Buffeljags, Breede	HIGH	B: SMALL RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL
H70C	WESTERN CAPE	Buffeljags, Breede	HIGH	B: SMALL RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL
H70D	WESTERN CAPE	Buffeljags, Breede	HIGH	B: SMALL RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL
H70E	WESTERN CAPE	Buffeljags, Breede	HIGH	B: SMALL RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL
H70F	WESTERN CAPE	Buffeljags, Breede	HIGH	B: SMALL RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL
H70G	WESTERN CAPE	Lower Breede, Slangrivier	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
H70H	WESTERN CAPE	Lower Breede, Slangrivier	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
H70J	WESTERN CAPE	Lower Breede, Slangrivier	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
H70K	WESTERN CAPE	Lower Breede, Slangrivier	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
H80A	WESTERN CAPE	Gouka, Duiwehoks	HIGH	B: SMALL RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
H80B	WESTERN CAPE	Gouka, Duiwehoks	HIGH	B: SMALL RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
H80C	WESTERN CAPE	Gouka, Duiwehoks	HIGH	B: SMALL RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
H80D	WESTERN CAPE	Lower Duiwehoks, Kaffirkuils	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
H80E	WESTERN CAPE	Lower Duiwehoks, Kaffirkuils	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
H80F	WESTERN CAPE	Lower Duiwehoks, Kaffirkuils	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
H90A	WESTERN CAPE	Gouka, Duiwehoks	HIGH	B: SMALL RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
H90B	WESTERN CAPE	Gouka, Duiwehoks	HIGH	B: SMALL RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
H90C	WESTERN CAPE	Gouka, Duiwehoks	HIGH	B: SMALL RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
H90D	WESTERN CAPE	dervied from h80d (CJK)	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
H90E	WESTERN CAPE	derived from h80e (CJK)	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED

Fig.28: EISC, PESC & AEMC for H10A - H50B

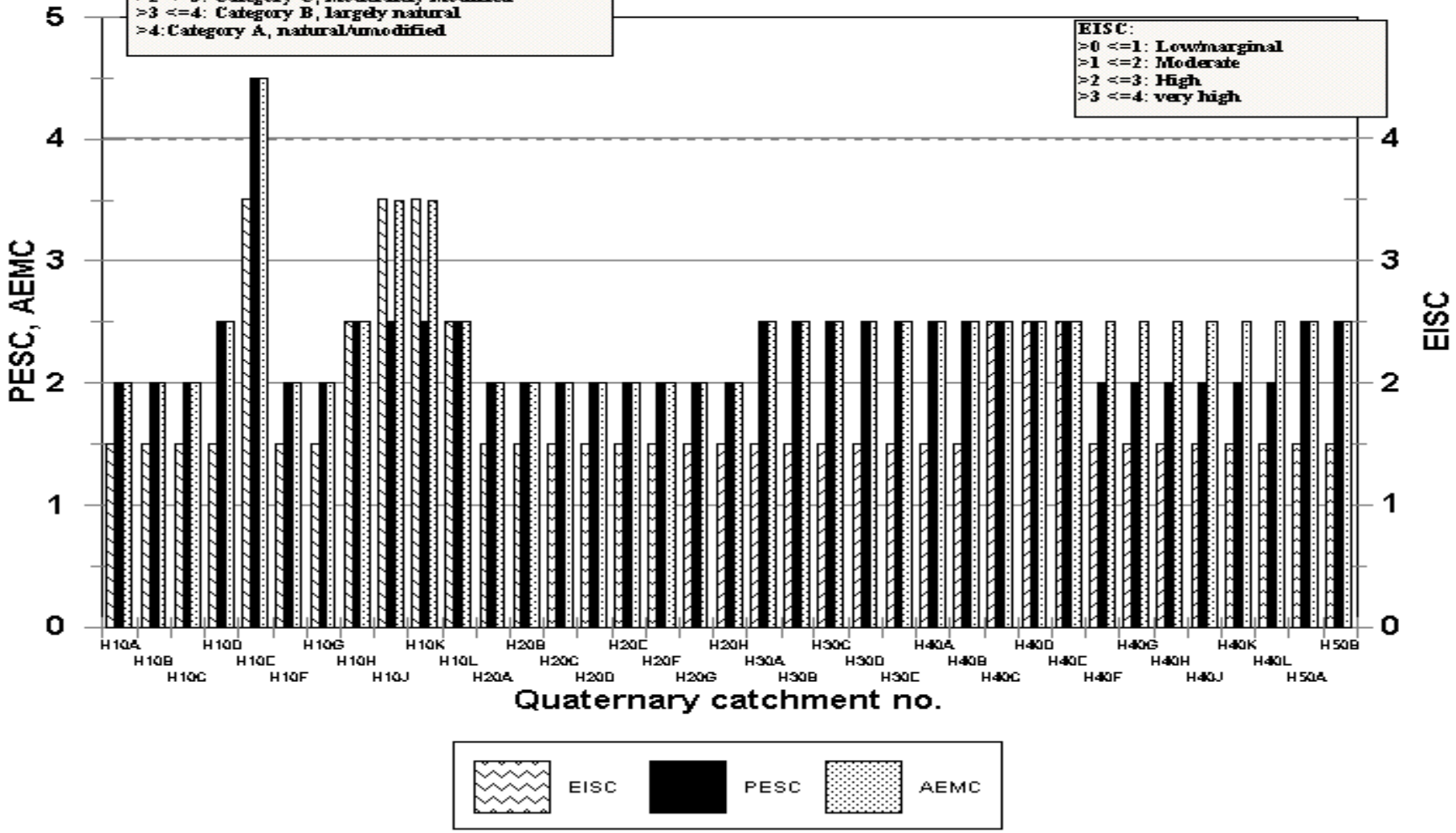


Fig.29: EISC, PESC & AEMC for H60A - H90E

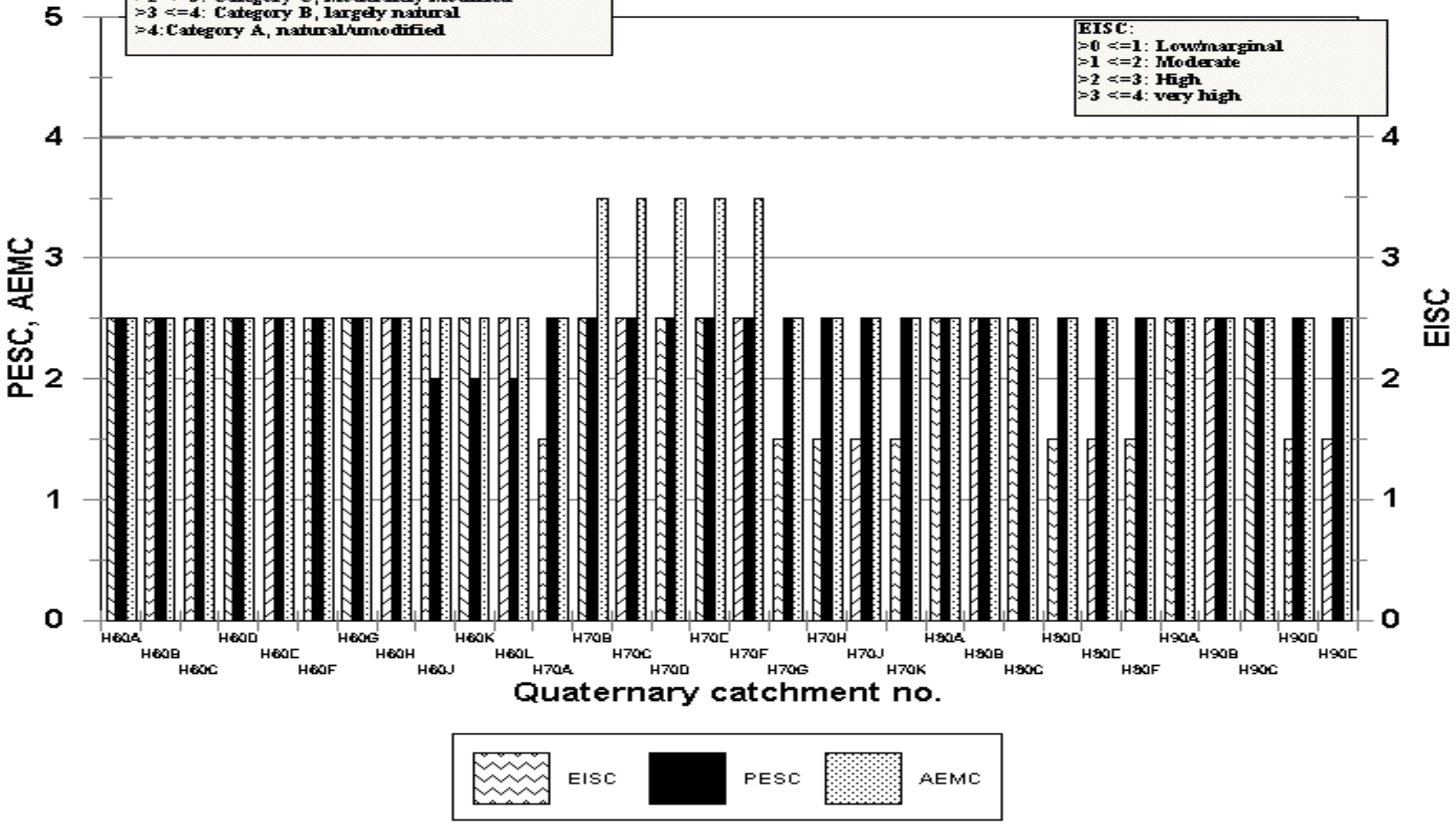


Table 9: Ratings for quaternary catchments of primary drainage J (Fig. 31 – 32).

QUAT.No.	PROVINCE	RIVERS	EISC	DEMC	PESC	BEST AEMC
J11A	WESTERN CAPE	Groot ,Touws, Buffels	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
J11B	WESTERN CAPE	Groot ,Touws, Buffels	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
J11C	WESTERN CAPE	Groot ,Touws, Buffels	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
J11D	WESTERN CAPE	Groot ,Touws, Buffels	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
J11E	WESTERN CAPE	Groot ,Touws, Buffels	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
J11F	WESTERN CAPE	Groot ,Touws, Buffels	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
J11G	WESTERN CAPE	Groot ,Touws, Buffels	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
J11H	WESTERN CAPE	Groot ,Touws, Buffels	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
J11J	WESTERN CAPE	Buffels River at Ladismith	HIGH	B: SMALL RISK ALLOWED	D: LARGELY MODIFIED	D: LARGELY MODIFIED
J11K	WESTERN CAPE	Groot ,Touws, Buffels	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
J12A	WESTERN CAPE	Groot ,Touws, Buffels	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
J12B	WESTERN CAPE	Groot ,Touws, Buffels	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
J12C	WESTERN CAPE	Groot ,Touws, Buffels	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
J12D	WESTERN CAPE	Groot ,Touws, Buffels	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
J12E	WESTERN CAPE	Groot ,Touws, Buffels	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
J12F	WESTERN CAPE	Groot ,Touws, Buffels	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
J12G	WESTERN CAPE	Groot ,Touws, Buffels	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
J12H	WESTERN CAPE	Groot ,Touws, Buffels	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
J12J	WESTERN CAPE	Groot ,Touws, Buffels	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
J12K	WESTERN CAPE	Groot ,Touws, Buffels	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
J12L	WESTERN CAPE	Groot ,Touws, Buffels	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
J12M	WESTERN CAPE	Groot ,Touws, Buffels	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
J13A	WESTERN CAPE	Groot ,Touws, Buffels	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
J13B	WESTERN CAPE	Groot ,Touws, Buffels	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
J13C	WESTERN CAPE	Groot ,Touws, Buffels	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
J21A	WESTERN CAPE	Gamka, Dwyka, Traka	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
J21B	WESTERN CAPE	Gamka, Dwyka, Traka	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
J21C	WESTERN CAPE	Gamka, Dwyka, Traka	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
J21D	WESTERN CAPE	Gamka, Dwyka, Traka	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
J21E	WESTERN CAPE	Gamka, Dwyka, Traka	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
J22A	WESTERN CAPE	Gamka, Dwyka, Traka	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
J22B	WESTERN CAPE	Gamka, Dwyka, Traka	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
J22C	WESTERN CAPE	Gamka, Dwyka, Traka	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
J22D	WESTERN CAPE	Gamka, Dwyka, Traka	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
J22E	WESTERN CAPE	Gamka, Dwyka, Traka	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
J22F	WESTERN CAPE	Gamka, Dwyka, Traka	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
J22G	WESTERN CAPE	Gamka, Dwyka, Traka	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
J22H	WESTERN CAPE	Gamka, Dwyka, Traka	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
J22J	WESTERN CAPE	Gamka, Dwyka, Traka	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
J22K	WESTERN CAPE	Gamka, Dwyka, Traka	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
J23A	WESTERN CAPE	Gamka, Dwyka, Traka	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
J23B	WESTERN CAPE	Gamka, Dwyka, Traka	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
J23C	WESTERN CAPE	Gamka, Dwyka, Traka	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
J23D	WESTERN CAPE	Gamka, Dwyka, Traka	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED

QUAT.No.	PROVINCE	RIVERS	EISC	DEMC	PESC	BEST AEMC
J23E	WESTERN CAPE	Gamka, Dwyka, Traka	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
J23F	WESTERN CAPE	Gamka, Dwyka, Traka	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
J23G	WESTERN CAPE	Gamka, Dwyka, Traka	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
J23H	WESTERN CAPE	Gamka, Dwyka, Traka	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
J23J	WESTERN CAPE	Nel, Gamka, Guis	HIGH	B: SMALL RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
J24A	WESTERN CAPE	Gamka, Dwyka, Traka	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
J24B	WESTERN CAPE	Gamka, Dwyka, Traka	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
J24C	WESTERN CAPE	Gamka, Dwyka, Traka	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
J24D	WESTERN CAPE	Gamka, Dwyka, Traka	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
J24E	WESTERN CAPE	Gamka, Dwyka, Traka	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
J24F	WESTERN CAPE	Gamka, Dwyka, Traka	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
J25A	WESTERN CAPE	Nel, Gamka, Guis	HIGH	B: SMALL RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
J25B	WESTERN CAPE	Nel, Gamka, Guis	HIGH	B: SMALL RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
J25C	WESTERN CAPE	Nel, Gamka, Guis	HIGH	B: SMALL RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
J25D	WESTERN CAPE	Nel, Gamka, Guis	HIGH	B: SMALL RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
J25E	WESTERN CAPE	Olifants, past Oudtshoorn till it joins Gamka	MODERATE	C: MODERATE RISK ALLOWED	D: LARGELY MODIFIED	D: LARGELY MODIFIED
J31A	WESTERN CAPE	Gamka, Dwyka, Traka	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
J31B	WESTERN CAPE	Gamka, Dwyka, Traka	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
J31C	WESTERN CAPE	Gamka, Dwyka, Traka	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
J31D	WESTERN CAPE	Gamka, Dwyka, Traka	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
J32A	WESTERN CAPE	Gamka, Dwyka, Traka	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
J32B	WESTERN CAPE	Gamka, Dwyka, Traka	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
J32C	WESTERN CAPE	Gamka, Dwyka, Traka	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
J32D	WESTERN CAPE	Gamka, Dwyka, Traka	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
J32E	WESTERN CAPE	Gamka, Dwyka, Traka	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
J33A	WESTERN CAPE	Olifants, past Oudtshoorn till it joins Gamka	MODERATE	C: MODERATE RISK ALLOWED	D: LARGELY MODIFIED	D: LARGELY MODIFIED
J33B	WESTERN CAPE	Olifants, past Oudtshoorn till it joins Gamka	MODERATE	C: MODERATE RISK ALLOWED	D: LARGELY MODIFIED	D: LARGELY MODIFIED
J33C	WESTERN CAPE	Olifants, past Oudtshoorn till it joins Gamka	MODERATE	C: MODERATE RISK ALLOWED	D: LARGELY MODIFIED	D: LARGELY MODIFIED
J33D	WESTERN CAPE	Olifants, past Oudtshoorn till it joins Gamka	MODERATE	C: MODERATE RISK ALLOWED	D: LARGELY MODIFIED	D: LARGELY MODIFIED
J33E	WESTERN CAPE	Olifants, past Oudtshoorn till it joins Gamka	MODERATE	C: MODERATE RISK ALLOWED	D: LARGELY MODIFIED	D: LARGELY MODIFIED
J33F	WESTERN CAPE	Olifants, past Oudtshoorn till it joins Gamka	MODERATE	C: MODERATE RISK ALLOWED	D: LARGELY MODIFIED	D: LARGELY MODIFIED
J34A	WESTERN CAPE	Kammanasie	MODERATE	C: MODERATE RISK ALLOWED	D: LARGELY MODIFIED	D: LARGELY MODIFIED
J34B	WESTERN CAPE	Kammanasie	MODERATE	C: MODERATE RISK ALLOWED	D: LARGELY MODIFIED	D: LARGELY MODIFIED
J34C	WESTERN CAPE	Kammanasie	MODERATE	C: MODERATE RISK ALLOWED	D: LARGELY MODIFIED	D: LARGELY MODIFIED

QUAT.No.	PROVINCE	RIVERS	EISC	DEMC	PESC	BEST AEMC
J34D	WESTERN CAPE	Kammanasie	MODERATE	C: MODERATE RISK ALLOWED	D: LARGELY MODIFIED	D: LARGELY MODIFIED
J34E	WESTERN CAPE	Kammanasie	MODERATE	C: MODERATE RISK ALLOWED	D: LARGELY MODIFIED	D: LARGELY MODIFIED
J34F	WESTERN CAPE	Kammanasie	MODERATE	C: MODERATE RISK ALLOWED	D: LARGELY MODIFIED	D: LARGELY MODIFIED
J35A	WESTERN CAPE	Olifants, past Oudtshoorn till it joins Gamka	MODERATE	C: MODERATE RISK ALLOWED	D: LARGELY MODIFIED	D: LARGELY MODIFIED
J35B	WESTERN CAPE	Olifants, past Oudtshoorn till it joins Gamka	MODERATE	C: MODERATE RISK ALLOWED	D: LARGELY MODIFIED	D: LARGELY MODIFIED
J35C	WESTERN CAPE	Olifants, past Oudtshoorn till it joins Gamka	MODERATE	C: MODERATE RISK ALLOWED	D: LARGELY MODIFIED	D: LARGELY MODIFIED
J35D	WESTERN CAPE	Olifants, past Oudtshoorn till it joins Gamka	MODERATE	C: MODERATE RISK ALLOWED	D: LARGELY MODIFIED	D: LARGELY MODIFIED
J35E	WESTERN CAPE	Olifants, past Oudtshoorn till it joins Gamka	MODERATE	C: MODERATE RISK ALLOWED	D: LARGELY MODIFIED	D: LARGELY MODIFIED
J35F	WESTERN CAPE	Olifants, past Oudtshoorn till it joins Gamka	MODERATE	C: MODERATE RISK ALLOWED	D: LARGELY MODIFIED	D: LARGELY MODIFIED
J40A	WESTERN CAPE	Gouritz	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	E - F: > E NOT ATTAINABLE IN 5 YR - USE D AS DEFAULT
J40B	WESTERN CAPE	Gouritz	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	E - F: > E NOT ATTAINABLE IN 5 YR - USE D AS DEFAULT
J40C	WESTERN CAPE	Gouritz	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	E - F: > E NOT ATTAINABLE IN 5 YR - USE D AS DEFAULT
J40D	WESTERN CAPE	Gouritz	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	E - F: > E NOT ATTAINABLE IN 5 YR - USE D AS DEFAULT
J40E	WESTERN CAPE	Gouritz	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	E - F: > E NOT ATTAINABLE IN 5 YR - USE D AS DEFAULT

Fig.30: EISC, PESC & AEMC for J11A - J22K

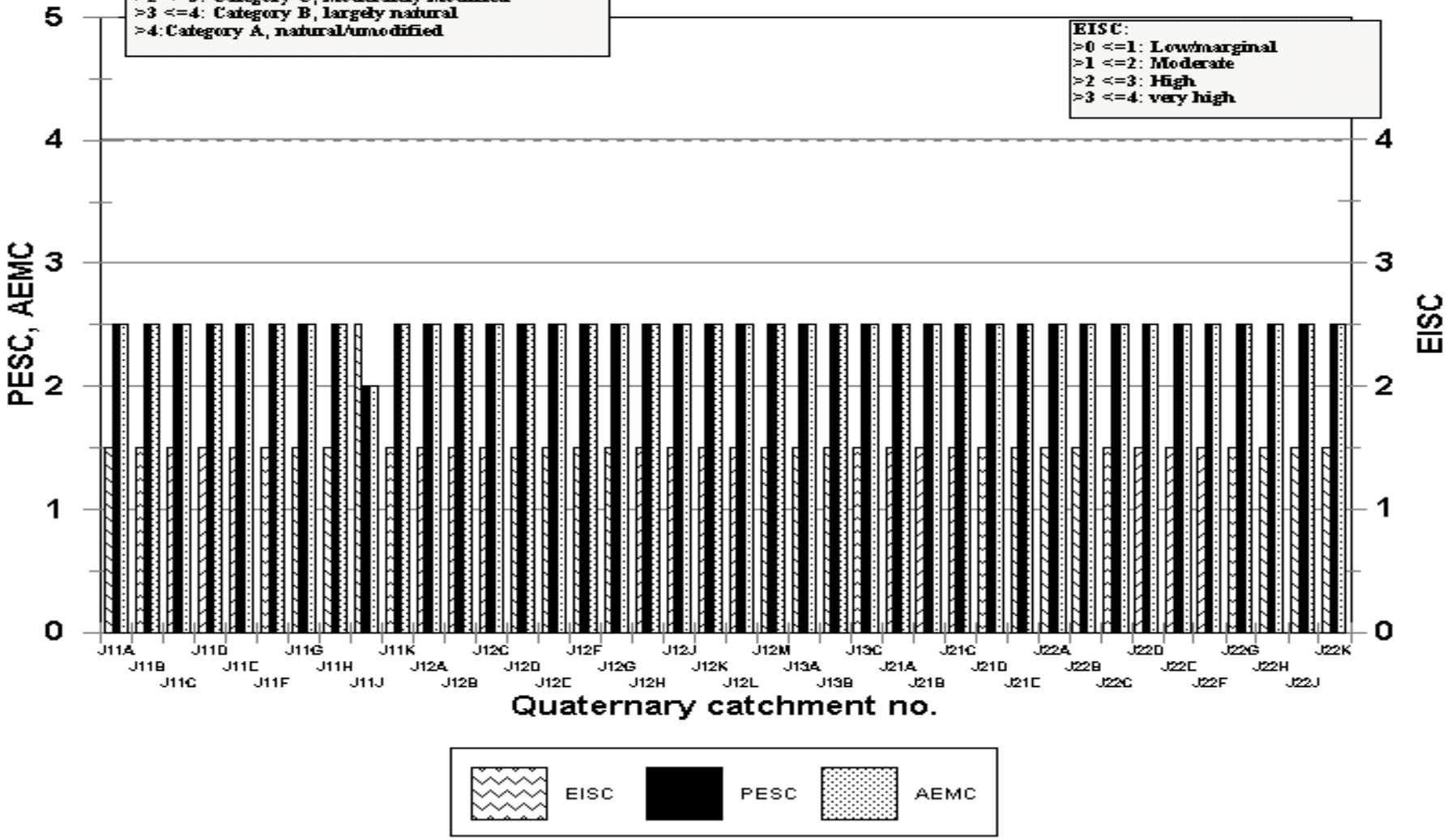


Fig.31: EISC, PESC & AEMC for J23A - J40E

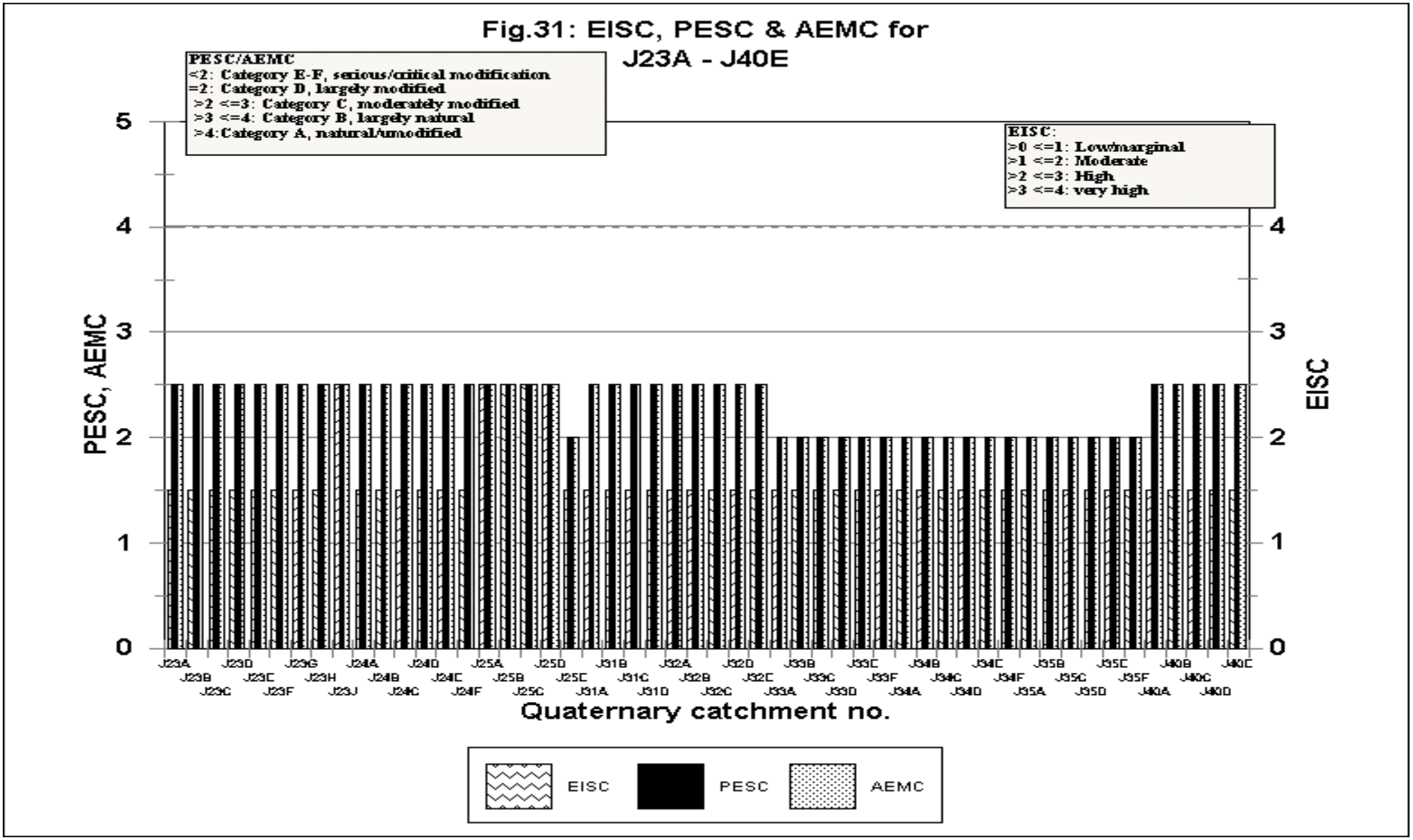


Table 10: Ratings for quaternary catchments of primary drainage K (Fig. 33).

QUAT.No.	PROVINCE	RIVERS	EISC	DEMC	PESC	BEST AEMC
K10A	WESTERN CAPE	Keimans, Hartenbos, Klein Brak, Groot Brak , Gwaing	VERY HIGH	A: NO HUMAN HAZARDS	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
K10B	WESTERN CAPE	Keimans, Hartenbos, Klein Brak, Groot Brak , Gwaing	VERY HIGH	A: NO HUMAN HAZARDS	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
K10C	WESTERN CAPE	Keimans, Hartenbos, Klein Brak, Groot Brak , Gwaing	VERY HIGH	A: NO HUMAN HAZARDS	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
K10D	WESTERN CAPE	Keimans, Hartenbos, Klein Brak, Groot Brak , Gwaing	VERY HIGH	A: NO HUMAN HAZARDS	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
K10E	WESTERN CAPE	Keimans, Hartenbos, Klein Brak, Groot Brak , Gwaing	VERY HIGH	A: NO HUMAN HAZARDS	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
K10F	WESTERN CAPE	Keimans, Hartenbos, Klein Brak, Groot Brak , Gwaing	VERY HIGH	A: NO HUMAN HAZARDS	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
K20A	WESTERN CAPE	Keimans, Hartenbos, Klein Brak, Groot Brak , Gwaing	VERY HIGH	A: NO HUMAN HAZARDS	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
K30A	WESTERN CAPE	Keimans, Hartenbos, Klein Brak, Groot Brak , Gwaing	VERY HIGH	A: NO HUMAN HAZARDS	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
K30B	WESTERN CAPE	Keimans, Hartenbos, Klein Brak, Groot Brak , Gwaing	VERY HIGH	A: NO HUMAN HAZARDS	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
K30C	WESTERN CAPE	Keimans, Hartenbos, Klein Brak, Groot Brak , Gwaing	VERY HIGH	A: NO HUMAN HAZARDS	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
K30D	WESTERN CAPE	Keurboom, Wilderness lakes, Knysna, Groot	VERY HIGH	A: NO HUMAN HAZARDS	B: LARGELY NATURAL	B: LARGELY NATURAL
K40A	WESTERN CAPE	Keurboom, Wilderness lakes, Knysna, Groot	VERY HIGH	A: NO HUMAN HAZARDS	B: LARGELY NATURAL	B: LARGELY NATURAL
K40B	WESTERN CAPE	Keurboom, Wilderness lakes, Knysna, Groot	VERY HIGH	A: NO HUMAN HAZARDS	B: LARGELY NATURAL	B: LARGELY NATURAL
K40C	WESTERN CAPE	Keurboom, Wilderness lakes, Knysna, Groot	VERY HIGH	A: NO HUMAN HAZARDS	B: LARGELY NATURAL	B: LARGELY NATURAL
K40D	WESTERN CAPE	Keurboom, Wilderness lakes, Knysna, Groot	VERY HIGH	A: NO HUMAN HAZARDS	B: LARGELY NATURAL	B: LARGELY NATURAL
K40E	WESTERN CAPE	Keurboom, Wilderness lakes, Knysna, Groot	VERY HIGH	A: NO HUMAN HAZARDS	B: LARGELY NATURAL	B: LARGELY NATURAL
K50A	WESTERN CAPE	Keurboom, Wilderness lakes, Knysna, Groot	VERY HIGH	A: NO HUMAN HAZARDS	B: LARGELY NATURAL	B: LARGELY NATURAL
K50B	WESTERN CAPE	Keurboom, Wilderness lakes, Knysna, Groot	VERY HIGH	A: NO HUMAN HAZARDS	B: LARGELY NATURAL	B: LARGELY NATURAL

QUAT.No.	PROVINCE	RIVERS	EISC	DEMC	PESC	BEST AEMC
K60A	WESTERN CAPE	Keurboom, Wilderness lakes, Knysna, Groot	VERY HIGH	A: NO HUMAN HAZARDS	B: LARGELY NATURAL	B: LARGELY NATURAL
K60B	WESTERN CAPE	Keurboom, Wilderness lakes, Knysna, Groot	VERY HIGH	A: NO HUMAN HAZARDS	B: LARGELY NATURAL	B: LARGELY NATURAL
K60C	WESTERN CAPE	Keurboom, Wilderness lakes, Knysna, Groot	VERY HIGH	A: NO HUMAN HAZARDS	B: LARGELY NATURAL	B: LARGELY NATURAL
K60D	WESTERN CAPE	Keurboom, Wilderness lakes, Knysna, Groot	VERY HIGH	A: NO HUMAN HAZARDS	B: LARGELY NATURAL	B: LARGELY NATURAL
K60E	WESTERN CAPE	Keurboom, Wilderness lakes, Knysna, Groot	VERY HIGH	A: NO HUMAN HAZARDS	B: LARGELY NATURAL	B: LARGELY NATURAL
K60F	WESTERN CAPE	Keurboom, Wilderness lakes, Knysna, Groot	VERY HIGH	A: NO HUMAN HAZARDS	B: LARGELY NATURAL	B: LARGELY NATURAL
K60G	WESTERN CAPE	Keurboom, Wilderness lakes, Knysna, Groot	VERY HIGH	A: NO HUMAN HAZARDS	B: LARGELY NATURAL	B: LARGELY NATURAL
K70A	WESTERN CAPE	Keurboom, Wilderness lakes, Knysna, Groot	VERY HIGH	A: NO HUMAN HAZARDS	B: LARGELY NATURAL	B: LARGELY NATURAL
K70B	WESTERN CAPE	Keurboom, Wilderness lakes, Knysna, Groot	VERY HIGH	A: NO HUMAN HAZARDS	B: LARGELY NATURAL	B: LARGELY NATURAL
K80A	EASTERN CAPE	Coastal Rivers	VERY HIGH	A: NO HUMAN HAZARDS	C: MODERATELY MODIFIED	B: LARGELY NATURAL
K80B	EASTERN CAPE	Coastal Rivers	VERY HIGH	A: NO HUMAN HAZARDS	C: MODERATELY MODIFIED	B: LARGELY NATURAL
K80C	EASTERN CAPE	Coastal Rivers	VERY HIGH	A: NO HUMAN HAZARDS	C: MODERATELY MODIFIED	B: LARGELY NATURAL
K80D	EASTERN CAPE	Coastal Rivers	VERY HIGH	A: NO HUMAN HAZARDS	C: MODERATELY MODIFIED	B: LARGELY NATURAL
K80E	EASTERN CAPE	Tsitsikamma	VERY HIGH	A: NO HUMAN HAZARDS	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
K80F	EASTERN CAPE	Tsitsikamma	VERY HIGH	A: NO HUMAN HAZARDS	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
K90A	EASTERN CAPE	Upper Kromm	HIGH	B: SMALL RISK ALLOWED	B: LARGELY NATURAL	B: LARGELY NATURAL
K90B	EASTERN CAPE	Kromm	HIGH	B: SMALL RISK ALLOWED	D: LARGELY MODIFIED	C: MODERATELY MODIFIED
K90C	EASTERN CAPE	Kromm	HIGH	B: SMALL RISK ALLOWED	D: LARGELY MODIFIED	C: MODERATELY MODIFIED
K90D	EASTERN CAPE	Kromm	HIGH	B: SMALL RISK ALLOWED	D: LARGELY MODIFIED	C: MODERATELY MODIFIED
K90E	EASTERN CAPE	Kromm	HIGH	B: SMALL RISK ALLOWED	D: LARGELY MODIFIED	C: MODERATELY MODIFIED
K90F	EASTERN CAPE	Seekoei and Kobeljou	HIGH	B: SMALL RISK ALLOWED	D: LARGELY MODIFIED	D: LARGELY MODIFIED
K90G	EASTERN CAPE	Seekoei and Kobeljou	HIGH	B: SMALL RISK ALLOWED	B: LARGELY NATURAL	B: LARGELY NATURAL

Fig.32: EISC, PESC & AEMC for K10A - K90G

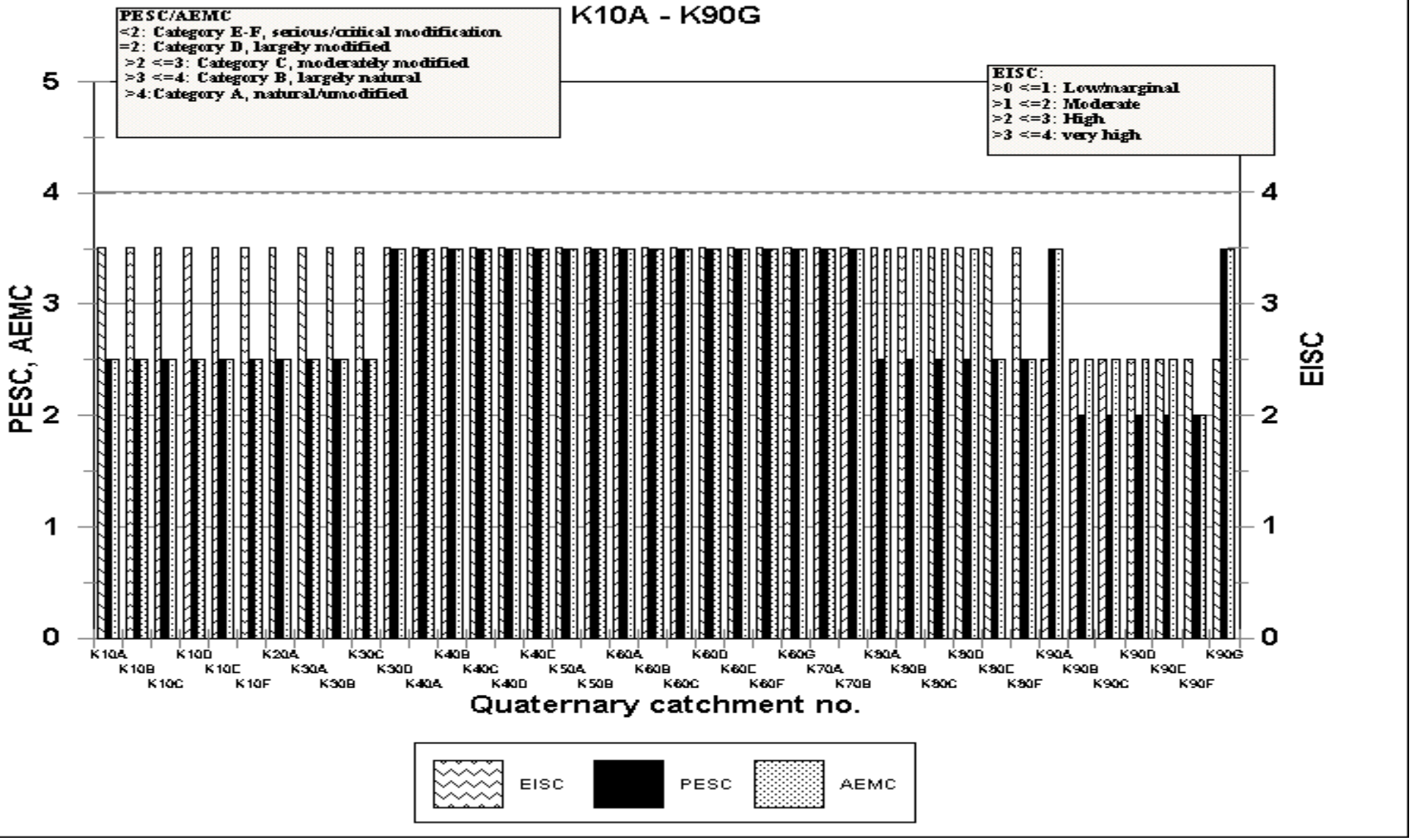


Table 11: Ratings for quaternary catchments of primary drainage L (Fig. 34 - 35).

QUAT.No.	PROVINCE	RIVERS	EISC	DEMC	PESC	BEST AEMC
L11A	EASTERN CAPE	Sout	LOW	D: LARGE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
L11B	EASTERN CAPE	Sout	LOW	D: LARGE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
L11C	EASTERN CAPE	Sout	LOW	D: LARGE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
L11D	EASTERN CAPE	Sout	LOW	D: LARGE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
L11E	EASTERN CAPE	Sout	LOW	D: LARGE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
L11F	EASTERN CAPE	Sout	LOW	D: LARGE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
L11G	EASTERN CAPE	endorheic	INVALID ENTRIES	WRONG ENTRY	E - F: NOT AN ACCEPTABLE	E - F: > E NOT ATTAINABLE IN 5 YR - USE D AS DEFAULT
L12A	EASTERN CAPE	Sout	LOW	D: LARGE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
L12B	EASTERN CAPE	Sout	LOW	D: LARGE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
L12C	EASTERN CAPE	Sout	LOW	D: LARGE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
L12D	EASTERN CAPE	Sout	LOW	D: LARGE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
L21A	EASTERN CAPE	Kariega	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
L21B	EASTERN CAPE	Kariega	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
L21C	EASTERN CAPE	Kariega	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
L21D	EASTERN CAPE	Kariega	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
L21E	EASTERN CAPE	Kariega	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
L21F	EASTERN CAPE	Kariega	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
L22A	EASTERN CAPE	Kariega	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
L22B	EASTERN CAPE	Kariega	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
L22C	EASTERN CAPE	Kariega	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
L22D	EASTERN CAPE	Kariega	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
L23A	EASTERN CAPE	Kariega	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
L23B	EASTERN CAPE	Kariega	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
L23C	EASTERN CAPE	Kariega	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
L23D	EASTERN CAPE	Kariega	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
L30A	EASTERN CAPE	Groot	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
L30B	EASTERN CAPE	Groot	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
L30C	EASTERN CAPE	Groot	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
L30D	EASTERN CAPE	Groot	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
L40A	EASTERN CAPE	Groot	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
L40B	EASTERN CAPE	Groot	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
L50A	EASTERN CAPE	not entered - use info for L70A (CJK)	HIGH	B: SMALL RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL
L50B	EASTERN CAPE	Groot	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
L60A	EASTERN CAPE	Groot	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
L60B	EASTERN CAPE	Groot	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
L70A	EASTERN CAPE	Groot	HIGH	B: SMALL RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL
L70B	EASTERN CAPE	Groot	HIGH	B: SMALL RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL
L70C	EASTERN CAPE	Groot	HIGH	B: SMALL RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL
L70D	EASTERN CAPE	Groot	HIGH	B: SMALL RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL
L70E	EASTERN CAPE	Groot	HIGH	B: SMALL RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL
L70F	EASTERN CAPE	Groot	HIGH	B: SMALL RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL
L70G	EASTERN CAPE	Groot	HIGH	B: SMALL RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL
L81A	EASTERN CAPE	Baviaanskloof	HIGH	B: SMALL RISK ALLOWED	B: LARGELY NATURAL	B: LARGELY NATURAL

QUAT.No.	PROVINCE	RIVERS	EISC	DEMC	PESC	BEST AEMC
L81B	EASTERN CAPE	Baviaanskloof	HIGH	B: SMALL RISK ALLOWED	B: LARGELY NATURAL	B: LARGELY NATURAL
L81C	EASTERN CAPE	Baviaanskloof	HIGH	B: SMALL RISK ALLOWED	B: LARGELY NATURAL	B: LARGELY NATURAL
L81D	EASTERN CAPE	Baviaanskloof	HIGH	B: SMALL RISK ALLOWED	B: LARGELY NATURAL	B: LARGELY NATURAL
L82A	EASTERN CAPE	Coega	HIGH	B: SMALL RISK ALLOWED	D: LARGELY MODIFIED	C: MODERATELY MODIFIED
L82B	EASTERN CAPE	Coega	HIGH	B: SMALL RISK ALLOWED	D: LARGELY MODIFIED	C: MODERATELY MODIFIED
L82C	EASTERN CAPE	Coega	HIGH	B: SMALL RISK ALLOWED	D: LARGELY MODIFIED	C: MODERATELY MODIFIED
L82D	EASTERN CAPE	Coega	HIGH	B: SMALL RISK ALLOWED	D: LARGELY MODIFIED	C: MODERATELY MODIFIED
L82E	EASTERN CAPE	Coega	HIGH	B: SMALL RISK ALLOWED	D: LARGELY MODIFIED	C: MODERATELY MODIFIED
L82F	EASTERN CAPE	Coega	HIGH	B: SMALL RISK ALLOWED	D: LARGELY MODIFIED	C: MODERATELY MODIFIED
L82G	EASTERN CAPE	Coega	HIGH	B: SMALL RISK ALLOWED	D: LARGELY MODIFIED	C: MODERATELY MODIFIED
L82H	EASTERN CAPE	Coega (Dam)	HIGH	B: SMALL RISK ALLOWED	E - F: NOT AN ACCEPTABLE	E - F: > E NOT ATTAINABLE IN 5 YR - USE D AS DEFAULT
L82J	EASTERN CAPE	Coega	HIGH	B: SMALL RISK ALLOWED	D: LARGELY MODIFIED	C: MODERATELY MODIFIED
L90A	EASTERN CAPE	Gamtoos	MODERATE	C: MODERATE RISK ALLOWED	D: LARGELY MODIFIED	C: MODERATELY MODIFIED
L90B	EASTERN CAPE	Gamtoos	MODERATE	C: MODERATE RISK ALLOWED	D: LARGELY MODIFIED	C: MODERATELY MODIFIED
L90C	EASTERN CAPE	Gamtoos	MODERATE	C: MODERATE RISK ALLOWED	D: LARGELY MODIFIED	C: MODERATELY MODIFIED

Fig.33: EISC, PESC & AEMC for L11A - L60B

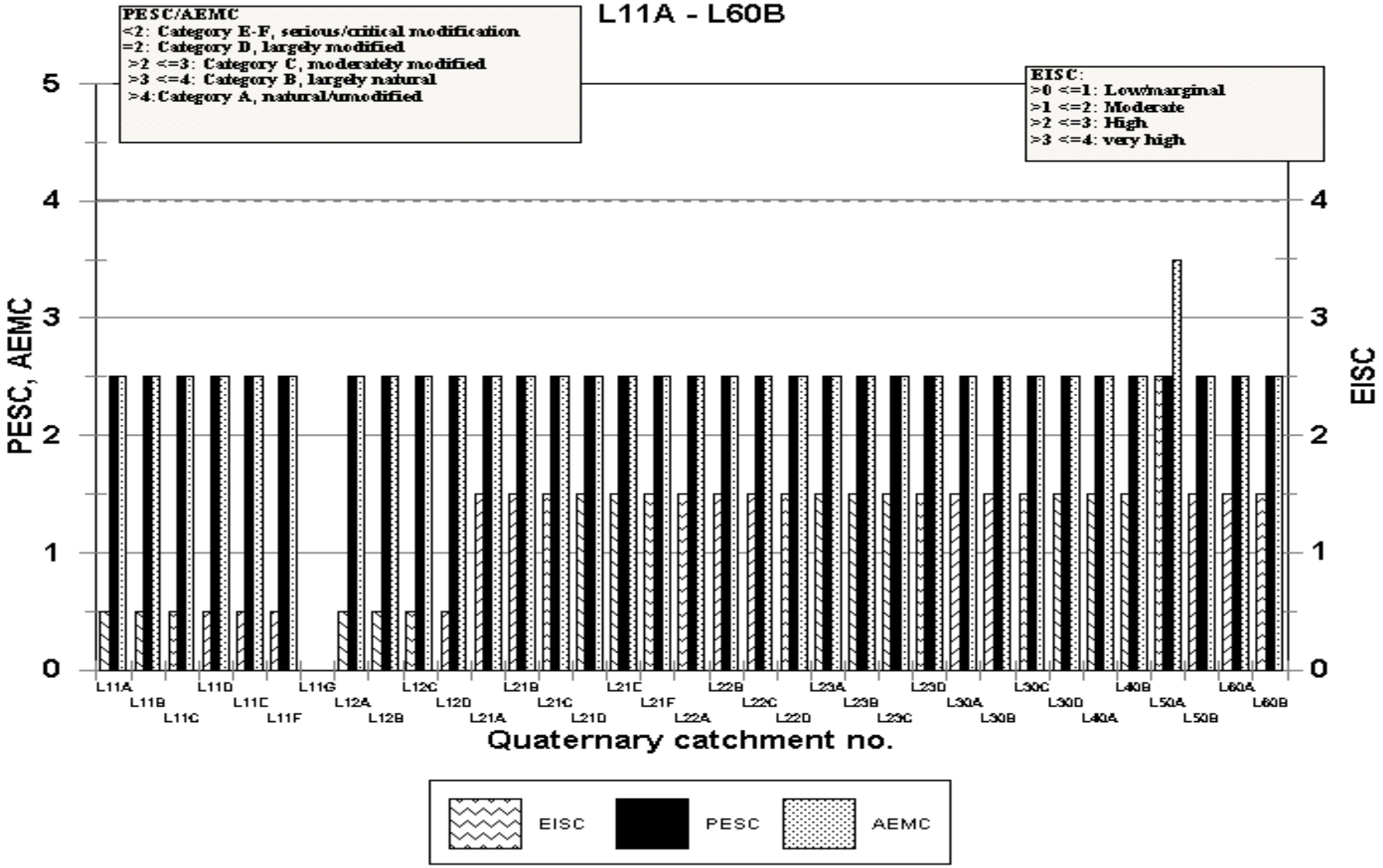


Fig.34: EISC, PESC & AEMC for L70A - L90C

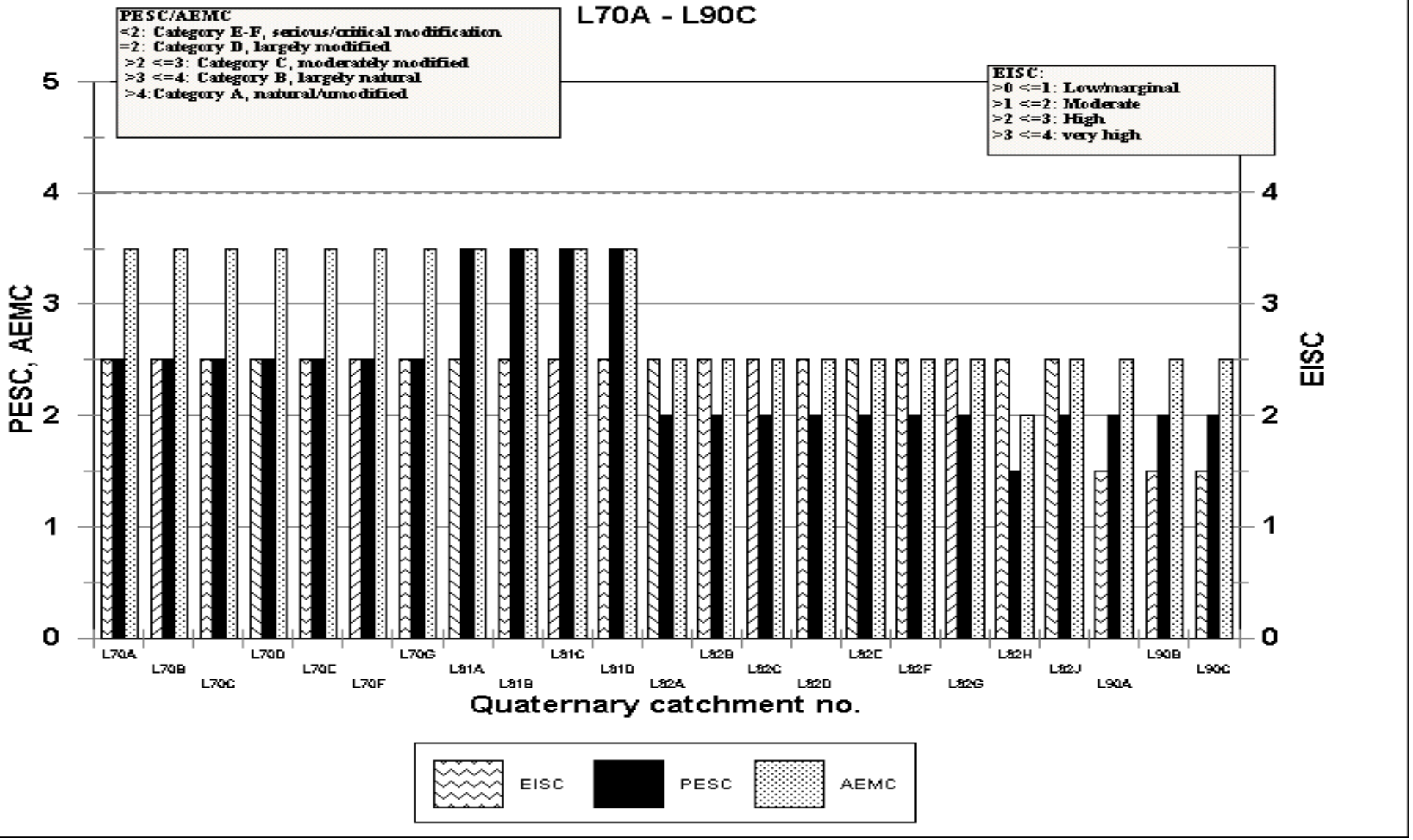


Table 12: Ratings for quaternary catchments of primary drainage M (Fig. 36).

QUAT.No.	PROVINCE	RIVERS	EISC	DEMC	PESC	BEST AEMC
M10A	EASTERN CAPE	Kwazunga	HIGH	B: SMALL RISK ALLOWED	A: UNMODIFIED, NATURAL	A: UNMODIFIED, NATURAL
M10B	EASTERN CAPE	Elands	HIGH	B: SMALL RISK ALLOWED	D: LARGELY MODIFIED	C: MODERATELY MODIFIED
M10C	EASTERN CAPE	Swartkops	HIGH	B: SMALL RISK ALLOWED	E - F: NOT AN ACCEPTABLE	C: MODERATELY MODIFIED
M10D	EASTERN CAPE	Swartkops	HIGH	B: SMALL RISK ALLOWED	E - F: NOT AN ACCEPTABLE	C: MODERATELY MODIFIED
M20A	EASTERN CAPE	Van Stadens	HIGH	B: SMALL RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
M20B	EASTERN CAPE	Van Stadens	HIGH	B: SMALL RISK ALLOWED	D: LARGELY MODIFIED	C: MODERATELY MODIFIED
M30A	EASTERN CAPE	Coega	HIGH	B: SMALL RISK ALLOWED	B: LARGELY NATURAL	B: LARGELY NATURAL
M30B	EASTERN CAPE	Coega	HIGH	B: SMALL RISK ALLOWED	E - F: NOT AN ACCEPTABLE	E - F: > E NOT ATTAINABLE IN 5 YR - USE D AS DEFAULT

Fig.35: EISC, PESC & AEMC for M10A - M30B

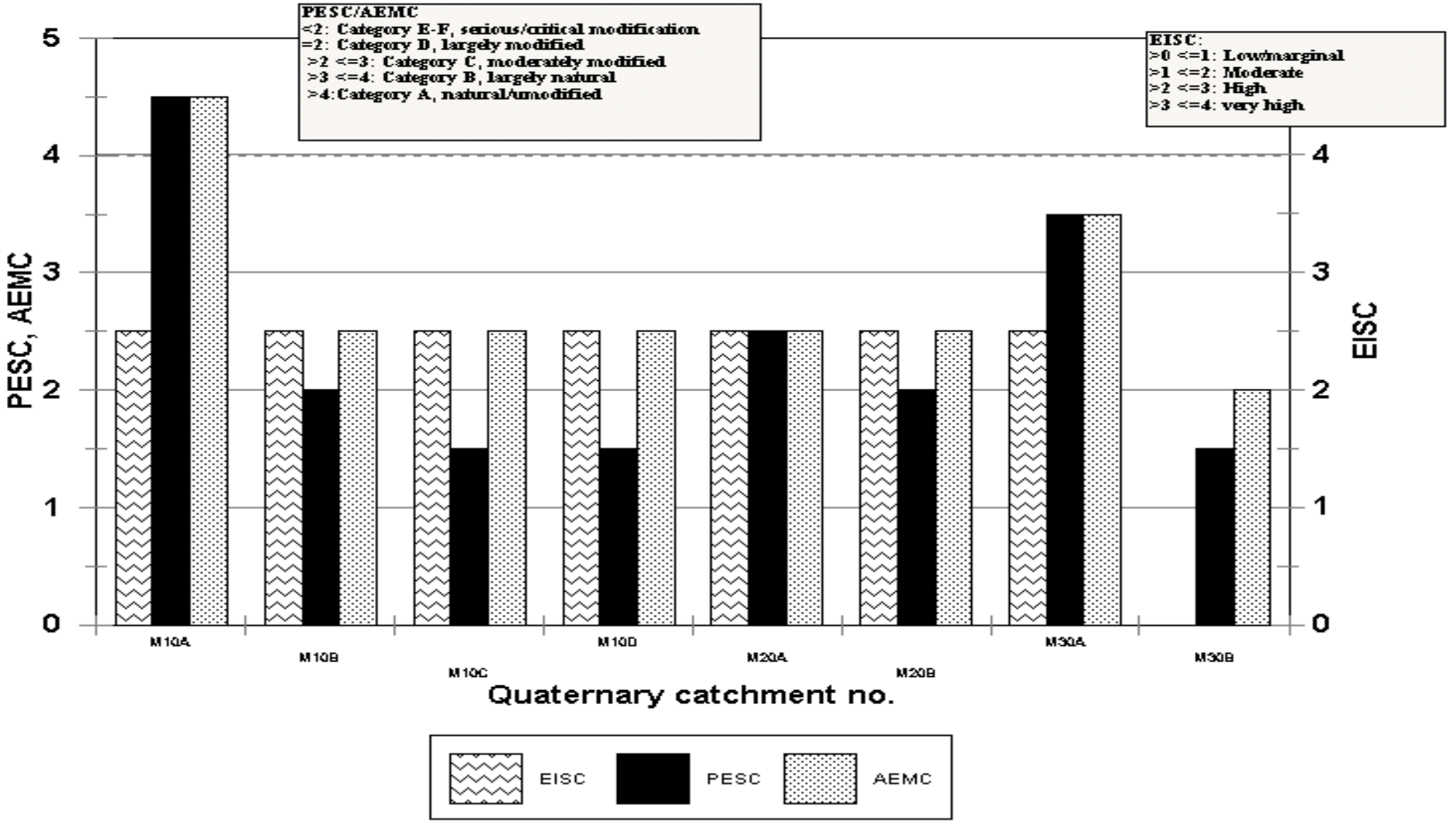


Table 13: Ratings for quaternary catchments of primary drainage N (Fig. 37).

QUAT.No.	PROVINCE	RIVERS	EISC	DEMC	PESC	BEST AEMC
N11A	EASTERN CAPE		MODERATE	C: MODERATE RISK ALLOWED	D: LARGELY MODIFIED	D: LARGELY MODIFIED
N11B	EASTERN CAPE		MODERATE	C: MODERATE RISK ALLOWED	D: LARGELY MODIFIED	D: LARGELY MODIFIED
N12A	EASTERN CAPE		MODERATE	C: MODERATE RISK ALLOWED	D: LARGELY MODIFIED	D: LARGELY MODIFIED
N12B	EASTERN CAPE		MODERATE	C: MODERATE RISK ALLOWED	D: LARGELY MODIFIED	D: LARGELY MODIFIED
N12C	EASTERN CAPE		MODERATE	C: MODERATE RISK ALLOWED	D: LARGELY MODIFIED	D: LARGELY MODIFIED
N13A	EASTERN CAPE		MODERATE	C: MODERATE RISK ALLOWED	D: LARGELY MODIFIED	D: LARGELY MODIFIED
N13B	EASTERN CAPE		MODERATE	C: MODERATE RISK ALLOWED	D: LARGELY MODIFIED	D: LARGELY MODIFIED
N13C	EASTERN CAPE	Sundays	MODERATE	C: MODERATE RISK ALLOWED	D: LARGELY MODIFIED	C: MODERATELY MODIFIED
N14A	EASTERN CAPE	Camdeboo	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
N14B	EASTERN CAPE	Camdeboo	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
N14C	EASTERN CAPE	Camdeboo	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
N14D	EASTERN CAPE	Camdeboo	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
N21A	EASTERN CAPE	Sundays	MODERATE	C: MODERATE RISK ALLOWED	D: LARGELY MODIFIED	C: MODERATELY MODIFIED
N21B	EASTERN CAPE	Melk River, seasonal rivers	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
N21C	EASTERN CAPE	Melk River, seasonal rivers	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
N21D	EASTERN CAPE	Sundays	MODERATE	C: MODERATE RISK ALLOWED	D: LARGELY MODIFIED	C: MODERATELY MODIFIED
N22A	EASTERN CAPE	Sundays tributaries	LOW	D: LARGE RISK ALLOWED	D: LARGELY MODIFIED	C: MODERATELY MODIFIED
N22B	EASTERN CAPE	Mainstream of Sundays	MODERATE	C: MODERATE RISK ALLOWED	D: LARGELY MODIFIED	D: LARGELY MODIFIED
N22C	EASTERN CAPE	Mainstream of Sundays	MODERATE	C: MODERATE RISK ALLOWED	D: LARGELY MODIFIED	D: LARGELY MODIFIED
N22D	EASTERN CAPE	Sundays tributaries	LOW	D: LARGE RISK ALLOWED	D: LARGELY MODIFIED	C: MODERATELY MODIFIED
N22E	EASTERN CAPE	Mainstream of Sundays	MODERATE	C: MODERATE RISK ALLOWED	D: LARGELY MODIFIED	D: LARGELY MODIFIED
N23A	EASTERN CAPE	Main Sundays (dam)	MODERATE	C: MODERATE RISK ALLOWED	E - F: NOT AN ACCEPTABLE	E - F: > E NOT ATTAINABLE IN 5 YR - USE D AS DEFAULT
N23B	EASTERN CAPE	darlington dam	LOW	D: LARGE RISK ALLOWED	E - F: NOT AN ACCEPTABLE	E - F: > E NOT ATTAINABLE IN 5 YR - USE D AS DEFAULT
N24A	EASTERN CAPE	Camdeboo	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
N24B	EASTERN CAPE	Mainstream of Sundays	MODERATE	C: MODERATE RISK ALLOWED	D: LARGELY MODIFIED	D: LARGELY MODIFIED
N24C	EASTERN CAPE	Mainstream of Sundays	MODERATE	C: MODERATE RISK ALLOWED	D: LARGELY MODIFIED	D: LARGELY MODIFIED
N24D	EASTERN CAPE	Mainstream of Sundays	MODERATE	C: MODERATE RISK ALLOWED	D: LARGELY MODIFIED	D: LARGELY MODIFIED
N30A	EASTERN CAPE	Melk River, seasonal rivers	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
N30B	EASTERN CAPE	Vogel	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
N30C	EASTERN CAPE	Vogel	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
N40A	EASTERN CAPE	Main Sundays (gorge)	HIGH	B: SMALL RISK ALLOWED	D: LARGELY MODIFIED	B: LARGELY NATURAL
N40B	EASTERN CAPE	Main Sundays	MODERATE	C: MODERATE RISK ALLOWED	D: LARGELY MODIFIED	C: MODERATELY MODIFIED
N40C	EASTERN CAPE	Main Sundays	MODERATE	C: MODERATE RISK ALLOWED	D: LARGELY MODIFIED	C: MODERATELY MODIFIED
N40D	EASTERN CAPE	Coerney	HIGH	B: SMALL RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
N40E	EASTERN CAPE	Main Sundays	MODERATE	C: MODERATE RISK ALLOWED	D: LARGELY MODIFIED	C: MODERATELY MODIFIED
N40F	EASTERN CAPE	main channel	MODERATE	C: MODERATE RISK ALLOWED	D: LARGELY MODIFIED	E - F: > E NOT ATTAINABLE IN 5 YR - USE D AS DEFAULT

Fig. 36: EISC, PESC & AEMC for N11A - N40F

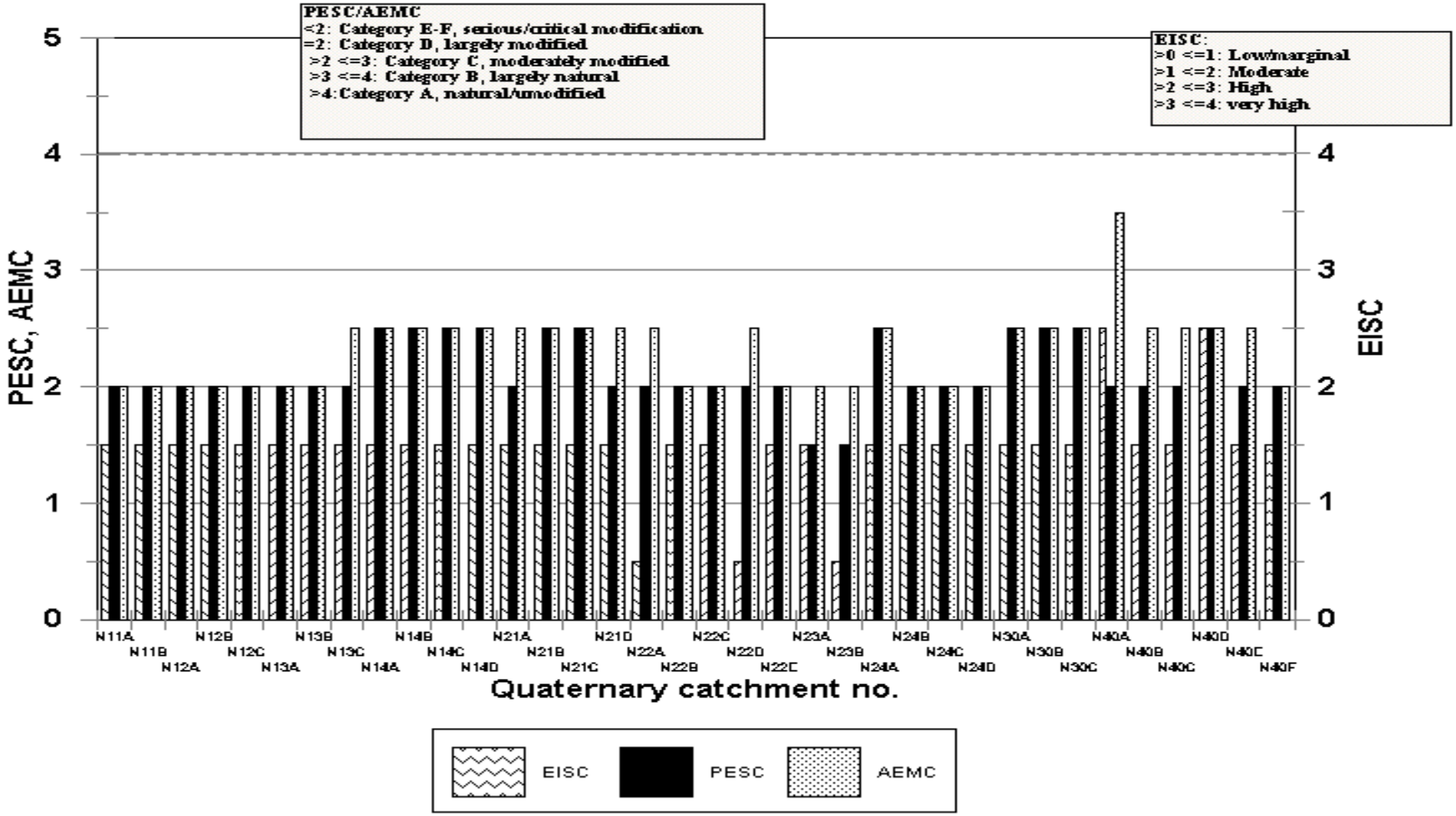


Table 14: Ratings for quaternary catchments of primary drainage P (Fig. 38).

QUAT.No.	PROVINCE	RIVERS	EISC	DEMC	PESC	BEST AEMC
P10A	EASTERN CAPE	Bushmans, Kowie	HIGH	B: SMALL RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
P10B	EASTERN CAPE	Bushmans, Kowie	HIGH	B: SMALL RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
P10C	EASTERN CAPE	Bushmans, Kowie	HIGH	B: SMALL RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
P10D	EASTERN CAPE	Bushmans, Kowie	HIGH	B: SMALL RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
P10E	EASTERN CAPE	Bushmans	MODERATE	C: MODERATE RISK ALLOWED	D: LARGELY MODIFIED	D: LARGELY MODIFIED
P10F	EASTERN CAPE	Bushmans	MODERATE	C: MODERATE RISK ALLOWED	D: LARGELY MODIFIED	D: LARGELY MODIFIED
P10G	EASTERN CAPE	Bushmans	MODERATE	C: MODERATE RISK ALLOWED	D: LARGELY MODIFIED	D: LARGELY MODIFIED
P20A	EASTERN CAPE	Bushmans	MODERATE	C: MODERATE RISK ALLOWED	D: LARGELY MODIFIED	D: LARGELY MODIFIED
P20B	EASTERN CAPE	Bushmans	MODERATE	C: MODERATE RISK ALLOWED	D: LARGELY MODIFIED	D: LARGELY MODIFIED
P30A	EASTERN CAPE	Bushmans, Kowie	HIGH	B: SMALL RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
P30B	EASTERN CAPE	Kariga, Lower Kowie	HIGH	B: SMALL RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
P30C	EASTERN CAPE	not entered - use info for P40C (CJK)	HIGH	B: SMALL RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
P40A	EASTERN CAPE	Bushmans, Kowie	HIGH	B: SMALL RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
P40B	EASTERN CAPE	Kariga, Lower Kowie	HIGH	B: SMALL RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
P40C	EASTERN CAPE	Kariga, Lower Kowie	HIGH	B: SMALL RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
P40D	EASTERN CAPE	Kariga, Lower Kowie	HIGH	B: SMALL RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED

Fig.37: EISC, PESC & AEMC for P10A - P40D

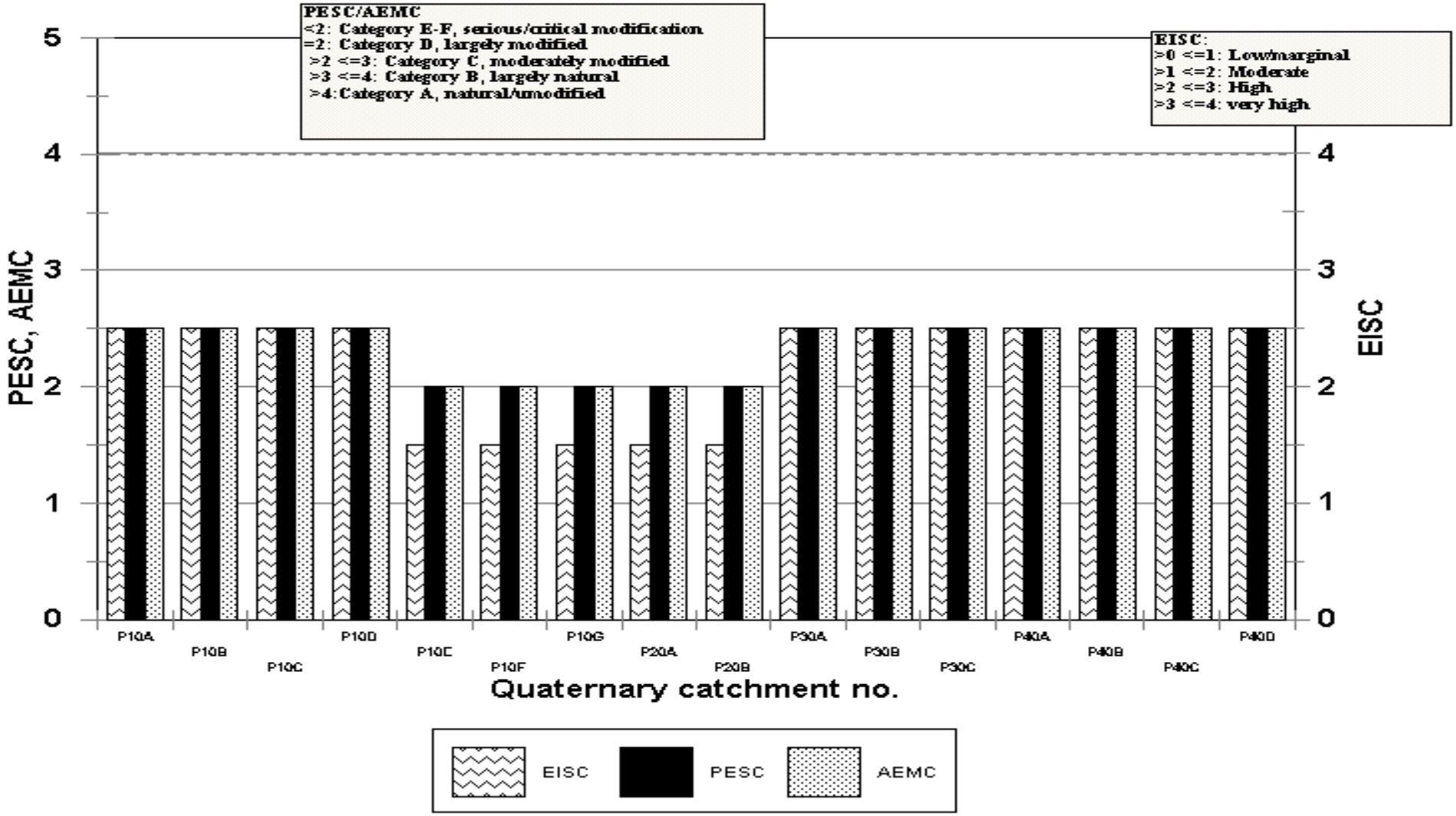


Table 15: Ratings for quaternary catchments of primary drainage Q (Fig. 39 – 41).

QUAT.No.	PROVINCE	RIVERS	EISC	DEMC	PESC	BEST AEMC
Q11A	EASTERN CAPE	Greak Brak	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL
Q11B	EASTERN CAPE	Greak Brak	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL
Q11C	EASTERN CAPE	Greak Brak	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL
Q11D	EASTERN CAPE	Greak Brak	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL
Q12A	EASTERN CAPE	Greak Brak	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL
Q12B	EASTERN CAPE	Greak Brak	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL
Q12C	EASTERN CAPE	Great Fish at Cradock	LOW	D: LARGE RISK ALLOWED	D: LARGELY MODIFIED	C: MODERATELY MODIFIED
Q13A	EASTERN CAPE	Great Fish at Cradock	LOW	D: LARGE RISK ALLOWED	D: LARGELY MODIFIED	C: MODERATELY MODIFIED
Q13B	EASTERN CAPE	Great Fish at Cradock	LOW	D: LARGE RISK ALLOWED	D: LARGELY MODIFIED	C: MODERATELY MODIFIED
Q13C	EASTERN CAPE	Great Fish at Cradock	LOW	D: LARGE RISK ALLOWED	D: LARGELY MODIFIED	C: MODERATELY MODIFIED
Q14A	EASTERN CAPE	Upper Great Fish	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
Q14B	EASTERN CAPE	Greak Brak	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL
Q14C	EASTERN CAPE	Greak Brak	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL
Q14D	EASTERN CAPE	Upper Great Fish	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
Q14E	EASTERN CAPE	Upper Great Fish	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
Q21A	EASTERN CAPE	Upper Great Fish	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
Q21B	EASTERN CAPE	Upper Great Fish	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
Q22A	EASTERN CAPE	Upper Great Fish	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
Q22B	EASTERN CAPE	Great Fish at Cradock	LOW	D: LARGE RISK ALLOWED	D: LARGELY MODIFIED	C: MODERATELY MODIFIED
Q30A	EASTERN CAPE	Upper Great Fish	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
Q30B	EASTERN CAPE	Great Fish at Cradock	LOW	D: LARGE RISK ALLOWED	D: LARGELY MODIFIED	C: MODERATELY MODIFIED
Q30C	EASTERN CAPE	Great Fish at Cradock	LOW	D: LARGE RISK ALLOWED	D: LARGELY MODIFIED	C: MODERATELY MODIFIED
Q30D	EASTERN CAPE	Great Fish at Cradock	LOW	D: LARGE RISK ALLOWED	D: LARGELY MODIFIED	C: MODERATELY MODIFIED
Q30E	EASTERN CAPE	Great Fish at Cradock	LOW	D: LARGE RISK ALLOWED	D: LARGELY MODIFIED	C: MODERATELY MODIFIED
Q41A	EASTERN CAPE	Tarka	LOW	D: LARGE RISK ALLOWED	D: LARGELY MODIFIED	C: MODERATELY MODIFIED
Q41B	EASTERN CAPE	Tarka	LOW	D: LARGE RISK ALLOWED	D: LARGELY MODIFIED	C: MODERATELY MODIFIED
Q41C	EASTERN CAPE	Tarka	LOW	D: LARGE RISK ALLOWED	D: LARGELY MODIFIED	C: MODERATELY MODIFIED
Q41D	EASTERN CAPE	Tarka	LOW	D: LARGE RISK ALLOWED	D: LARGELY MODIFIED	C: MODERATELY MODIFIED
Q42A	EASTERN CAPE	not entered use Q42B info (CJK)	LOW	D: LARGE RISK ALLOWED	D: LARGELY MODIFIED	D: LARGELY MODIFIED
Q42B	EASTERN CAPE	Tarka	LOW	D: LARGE RISK ALLOWED	D: LARGELY MODIFIED	C: MODERATELY MODIFIED
Q43A	EASTERN CAPE	not entered - use data for Q43B (CJK)	LOW	D: LARGE RISK ALLOWED	D: LARGELY MODIFIED	D: LARGELY MODIFIED
Q43B	EASTERN CAPE	Tarka	LOW	D: LARGE RISK ALLOWED	D: LARGELY MODIFIED	C: MODERATELY MODIFIED
Q44A	EASTERN CAPE	Tarka	LOW	D: LARGE RISK ALLOWED	D: LARGELY MODIFIED	C: MODERATELY MODIFIED
Q44B	EASTERN CAPE	Tarka	LOW	D: LARGE RISK ALLOWED	D: LARGELY MODIFIED	C: MODERATELY MODIFIED
Q44C	EASTERN CAPE	Tarka	LOW	D: LARGE RISK ALLOWED	D: LARGELY MODIFIED	C: MODERATELY MODIFIED
Q50A	EASTERN CAPE	Great Fish	MODERATE	C: MODERATE RISK ALLOWED	D: LARGELY MODIFIED	C: MODERATELY MODIFIED
Q50B	EASTERN CAPE	Great Fish	MODERATE	C: MODERATE RISK ALLOWED	D: LARGELY MODIFIED	C: MODERATELY MODIFIED
Q50C	EASTERN CAPE	Great Fish	MODERATE	C: MODERATE RISK ALLOWED	D: LARGELY MODIFIED	C: MODERATELY MODIFIED
Q60A	EASTERN CAPE	Koonap	HIGH	B: SMALL RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL
Q60B	EASTERN CAPE	Koonap	HIGH	B: SMALL RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL
Q60C	EASTERN CAPE	Koonap	HIGH	B: SMALL RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL
Q70A	EASTERN CAPE	Great Fish	MODERATE	C: MODERATE RISK ALLOWED	D: LARGELY MODIFIED	C: MODERATELY MODIFIED
Q70B	EASTERN CAPE	Great Fish	MODERATE	C: MODERATE RISK ALLOWED	D: LARGELY MODIFIED	C: MODERATELY MODIFIED

QUAT.No.	PROVINCE	RIVERS	EISC	DEMC	PESC	BEST AEMC
Q70C	EASTERN CAPE	Great Fish	MODERATE	C: MODERATE RISK ALLOWED	D: LARGELY MODIFIED	C: MODERATELY MODIFIED
Q80A	EASTERN CAPE	headwaters of the little fish	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL
Q80B	EASTERN CAPE	Lower little Fish	LOW	D: LARGE RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL
Q80C	EASTERN CAPE	Lower little Fish	LOW	D: LARGE RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL
Q80D	EASTERN CAPE	Lower little Fish	LOW	D: LARGE RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL
Q80E	EASTERN CAPE	Lower little Fish	LOW	D: LARGE RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL
Q80F	EASTERN CAPE	Brak	LOW	D: LARGE RISK ALLOWED	B: LARGELY NATURAL	B: LARGELY NATURAL
Q80G	EASTERN CAPE	Lower little Fish	MODERATE	C: MODERATE RISK ALLOWED	D: LARGELY MODIFIED	C: MODERATELY MODIFIED
Q91A	EASTERN CAPE	Great Fish	MODERATE	C: MODERATE RISK ALLOWED	D: LARGELY MODIFIED	C: MODERATELY MODIFIED
Q91B	EASTERN CAPE	Great Fish	MODERATE	C: MODERATE RISK ALLOWED	D: LARGELY MODIFIED	C: MODERATELY MODIFIED
Q91C	EASTERN CAPE	Great Fish	MODERATE	C: MODERATE RISK ALLOWED	D: LARGELY MODIFIED	C: MODERATELY MODIFIED
Q92A	EASTERN CAPE	Kat	HIGH	B: SMALL RISK ALLOWED	D: LARGELY MODIFIED	C: MODERATELY MODIFIED
Q92B	EASTERN CAPE	Koonap	HIGH	B: SMALL RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL
Q92C	EASTERN CAPE	Koonap	HIGH	B: SMALL RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL
Q92D	EASTERN CAPE	Koonap	HIGH	B: SMALL RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL
Q92E	EASTERN CAPE	Koonap	HIGH	B: SMALL RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL
Q92F	EASTERN CAPE	Koonap	HIGH	B: SMALL RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL
Q92G	EASTERN CAPE	Koonap	HIGH	B: SMALL RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL
Q93A	EASTERN CAPE	Lower Fish	MODERATE	C: MODERATE RISK ALLOWED	D: LARGELY MODIFIED	C: MODERATELY MODIFIED
Q93B	EASTERN CAPE	Lower Fish	MODERATE	C: MODERATE RISK ALLOWED	D: LARGELY MODIFIED	C: MODERATELY MODIFIED
Q93C	EASTERN CAPE	Lower Fish	MODERATE	C: MODERATE RISK ALLOWED	D: LARGELY MODIFIED	C: MODERATELY MODIFIED
Q93D	EASTERN CAPE	Lower Fish	MODERATE	C: MODERATE RISK ALLOWED	D: LARGELY MODIFIED	C: MODERATELY MODIFIED
Q94A	EASTERN CAPE	Kat	HIGH	B: SMALL RISK ALLOWED	D: LARGELY MODIFIED	C: MODERATELY MODIFIED
Q94B	EASTERN CAPE	Kat	HIGH	B: SMALL RISK ALLOWED	D: LARGELY MODIFIED	C: MODERATELY MODIFIED
Q94C	EASTERN CAPE	Kat	HIGH	B: SMALL RISK ALLOWED	D: LARGELY MODIFIED	C: MODERATELY MODIFIED
Q94D	EASTERN CAPE	Kat	HIGH	B: SMALL RISK ALLOWED	D: LARGELY MODIFIED	C: MODERATELY MODIFIED
Q94E	EASTERN CAPE	Kat	HIGH	B: SMALL RISK ALLOWED	D: LARGELY MODIFIED	C: MODERATELY MODIFIED
Q94F	EASTERN CAPE	Kat	HIGH	B: SMALL RISK ALLOWED	D: LARGELY MODIFIED	C: MODERATELY MODIFIED

Fig.38: EISC, PESC & AEMC for Q10A - Q50C

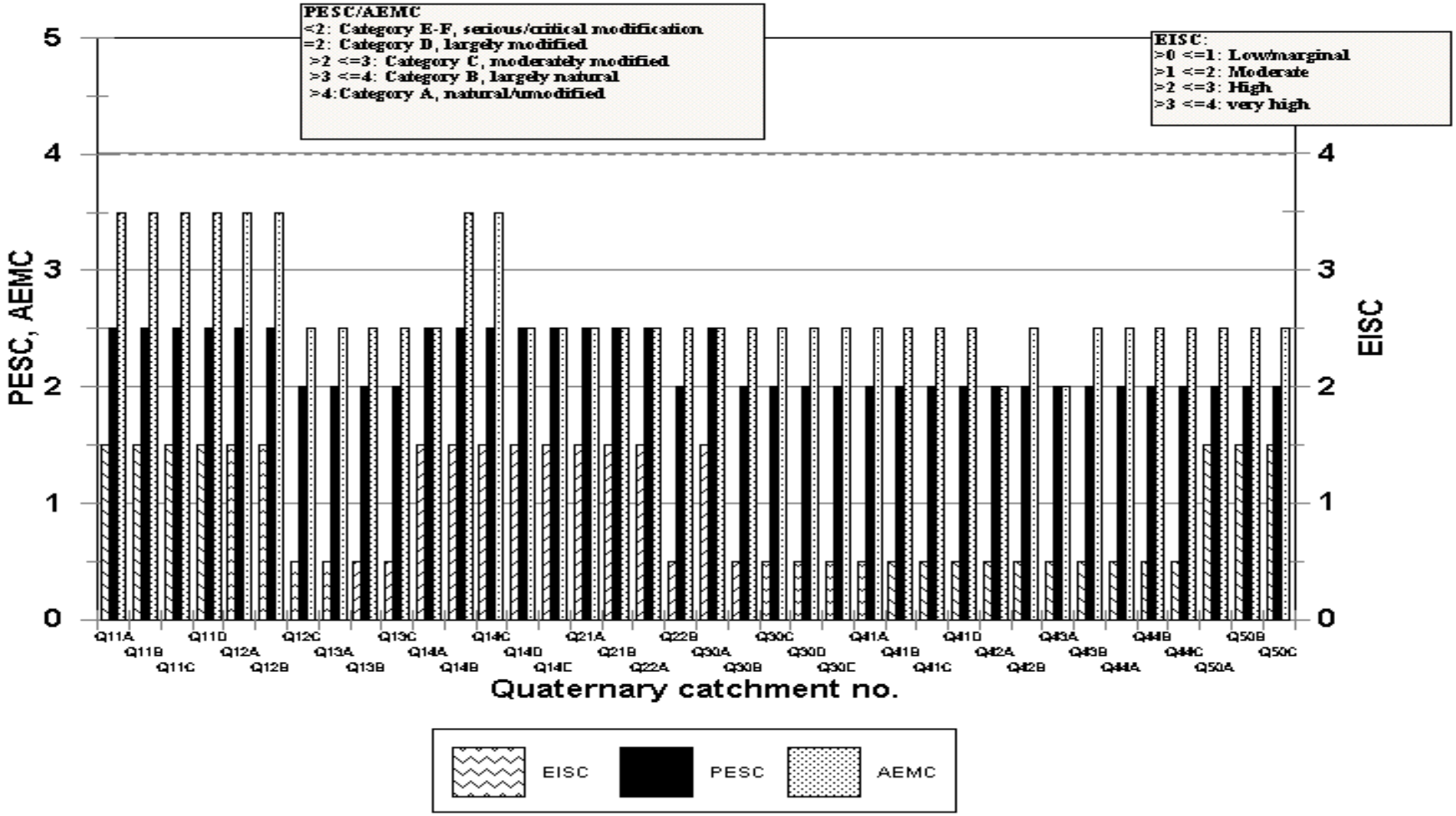


Fig.39: EISC, PESC & AEMC for Q60A - Q94F

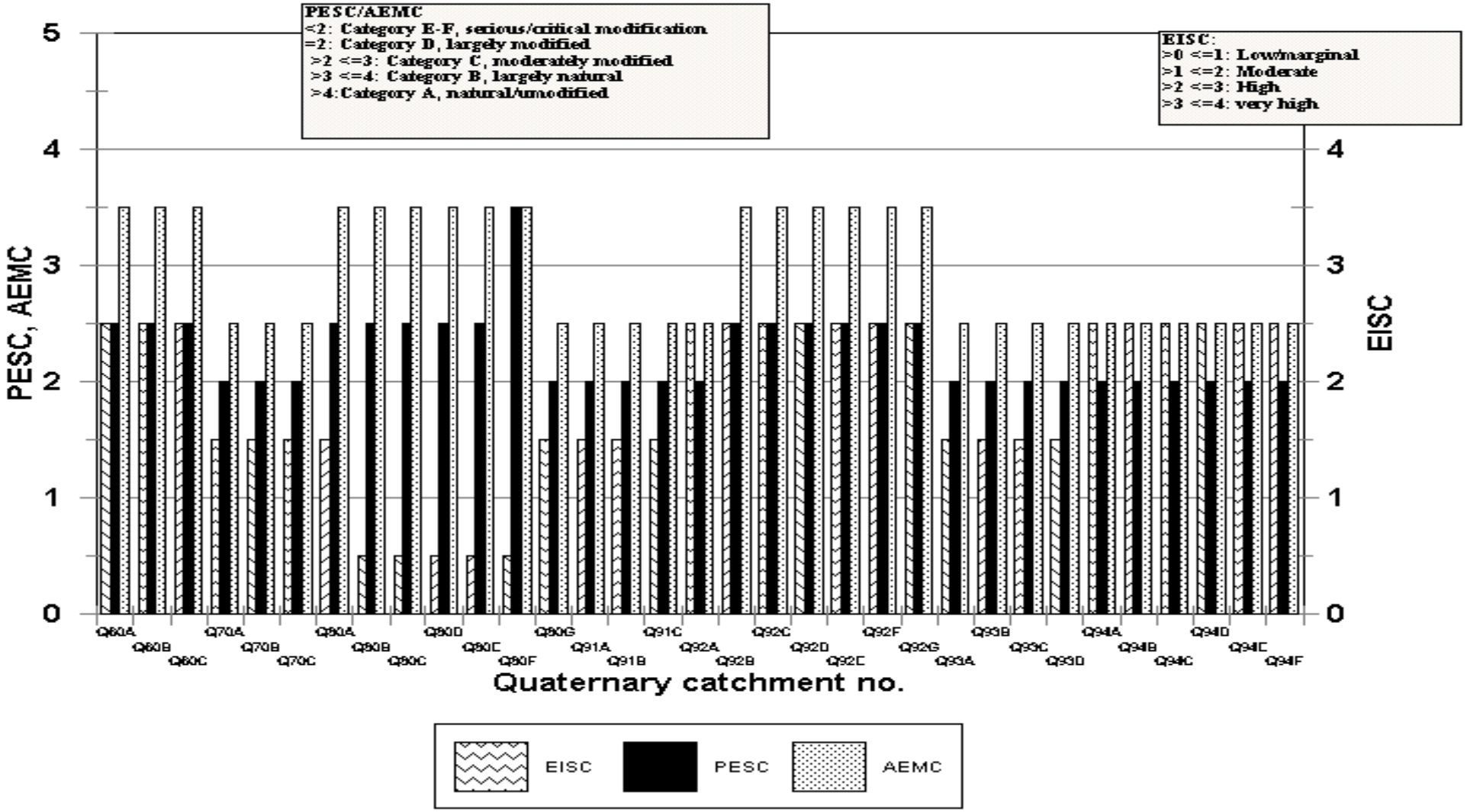


Table 16: Ratings for quaternary catchments of primary drainage R (Fig. 42).

QUAT.No.	PROVINCE	RIVERS	EISC	DEMC	PESC	BEST AEMC
R10A	EASTERN CAPE	Upper Buffel	VERY HIGH	A: NO HUMAN HAZARDS	C: MODERATELY MODIFIED	B: LARGELY NATURAL
R10B	EASTERN CAPE	Upper Buffel	VERY HIGH	A: NO HUMAN HAZARDS	C: MODERATELY MODIFIED	B: LARGELY NATURAL
R10C	EASTERN CAPE	Upper Kaiskamma	VERY HIGH	A: NO HUMAN HAZARDS	C: MODERATELY MODIFIED	B: LARGELY NATURAL
R10D	EASTERN CAPE	Upper Kaiskamma	VERY HIGH	A: NO HUMAN HAZARDS	C: MODERATELY MODIFIED	B: LARGELY NATURAL
R10E	EASTERN CAPE	Upper Kaiskamma	VERY HIGH	A: NO HUMAN HAZARDS	C: MODERATELY MODIFIED	B: LARGELY NATURAL
R10F	EASTERN CAPE	Upper Buffel	VERY HIGH	A: NO HUMAN HAZARDS	C: MODERATELY MODIFIED	B: LARGELY NATURAL
R10G	EASTERN CAPE	Upper Kaiskamma	VERY HIGH	A: NO HUMAN HAZARDS	C: MODERATELY MODIFIED	B: LARGELY NATURAL
R10H	EASTERN CAPE	Upper Kaiskamma	VERY HIGH	A: NO HUMAN HAZARDS	C: MODERATELY MODIFIED	B: LARGELY NATURAL
R10J	EASTERN CAPE	Lower Kaiskamma	HIGH	B: SMALL RISK ALLOWED	D: LARGELY MODIFIED	C: MODERATELY MODIFIED
R10K	EASTERN CAPE	Lower Kaiskamma	HIGH	B: SMALL RISK ALLOWED	D: LARGELY MODIFIED	C: MODERATELY MODIFIED
R10L	EASTERN CAPE	Lower Kaiskamma	HIGH	B: SMALL RISK ALLOWED	D: LARGELY MODIFIED	C: MODERATELY MODIFIED
R10M	EASTERN CAPE	Lower Kaiskamma	HIGH	B: SMALL RISK ALLOWED	D: LARGELY MODIFIED	C: MODERATELY MODIFIED
R20A	EASTERN CAPE	Upper Buffel	VERY HIGH	A: NO HUMAN HAZARDS	C: MODERATELY MODIFIED	B: LARGELY NATURAL
R20B	EASTERN CAPE	Buffalo	MODERATE	C: MODERATE RISK ALLOWED	D: LARGELY MODIFIED	C: MODERATELY MODIFIED
R20C	EASTERN CAPE	Buffalo	MODERATE	C: MODERATE RISK ALLOWED	D: LARGELY MODIFIED	C: MODERATELY MODIFIED
R20D	EASTERN CAPE	Buffalo	MODERATE	C: MODERATE RISK ALLOWED	D: LARGELY MODIFIED	C: MODERATELY MODIFIED
R20E	EASTERN CAPE	Buffalo	MODERATE	C: MODERATE RISK ALLOWED	D: LARGELY MODIFIED	C: MODERATELY MODIFIED
R20F	EASTERN CAPE	Buffalo	MODERATE	C: MODERATE RISK ALLOWED	D: LARGELY MODIFIED	C: MODERATELY MODIFIED
R20G	EASTERN CAPE	Buffalo	MODERATE	C: MODERATE RISK ALLOWED	D: LARGELY MODIFIED	C: MODERATELY MODIFIED
R30A	EASTERN CAPE	Nahoon, Ganubi, Kwelera, Coastal streams	MODERATE	C: MODERATE RISK ALLOWED	D: LARGELY MODIFIED	D: LARGELY MODIFIED
R30B	EASTERN CAPE	Nahoon, Ganubi, Kwelera, Coastal streams	MODERATE	C: MODERATE RISK ALLOWED	D: LARGELY MODIFIED	D: LARGELY MODIFIED
R30C	EASTERN CAPE	Nahoon, Ganubi, Kwelera, Coastal streams	MODERATE	C: MODERATE RISK ALLOWED	D: LARGELY MODIFIED	D: LARGELY MODIFIED
R30D	EASTERN CAPE	Nahoon, Ganubi, Kwelera, Coastal streams	MODERATE	C: MODERATE RISK ALLOWED	D: LARGELY MODIFIED	D: LARGELY MODIFIED
R30E	EASTERN CAPE	Nahoon, Ganubi, Kwelera, Coastal streams	MODERATE	C: MODERATE RISK ALLOWED	D: LARGELY MODIFIED	D: LARGELY MODIFIED
R30F	EASTERN CAPE	Nahoon, Ganubi, Kwelera, Coastal streams	MODERATE	C: MODERATE RISK ALLOWED	D: LARGELY MODIFIED	D: LARGELY MODIFIED
R40A	EASTERN CAPE	Bira, Mgallna, Mtati	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
R40B	EASTERN CAPE	Bira, Mgallna, Mtati	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
R40C	EASTERN CAPE	Bira, Mgallna, Mtati	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
R50A	EASTERN CAPE	Bira, Mgallna, Mtati	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
R50B	EASTERN CAPE	Bira, Mgallna, Mtati	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED

Fig.40: EISC, PESC & AEMC for R10A - R50B

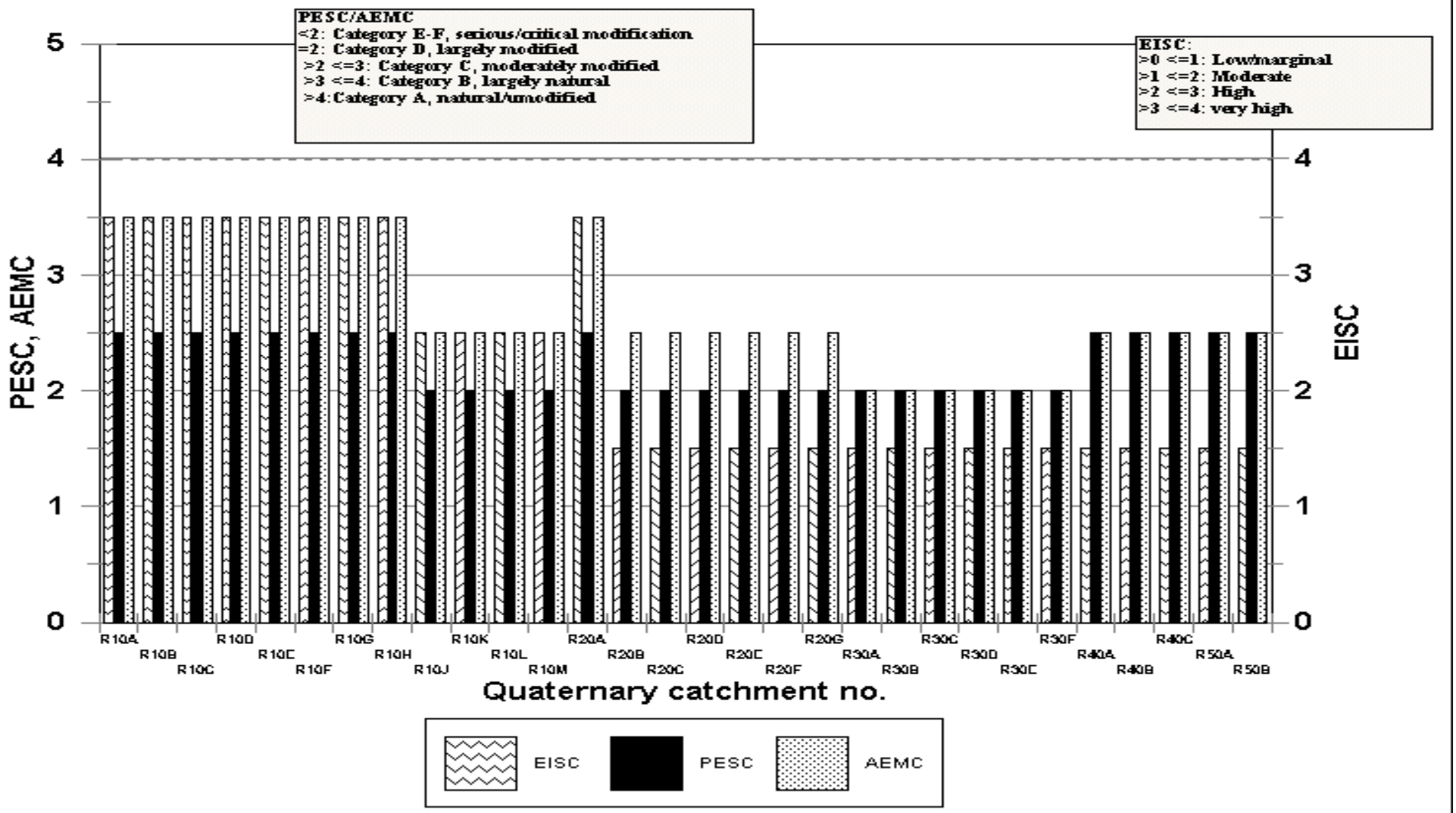


Table 17: Ratings for quaternary catchments of primary drainage S (Fig. 43 - 44).

QUAT.No.	PROVINCE	RIVERS	EISC	DEMC	PESC	BEST AEMC
S10A	EASTERN CAPE	Upper White Kei	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL
S10B	EASTERN CAPE	Upper White Kei	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL
S10C	EASTERN CAPE	Upper White Kei	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL
S10D	EASTERN CAPE	Upper White Kei	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL
S10E	EASTERN CAPE	Middle White Kei	LOW	D: LARGE RISK ALLOWED	D: LARGELY MODIFIED	C: MODERATELY MODIFIED
S10F	EASTERN CAPE	Upper White Kei	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL
S10G	EASTERN CAPE	Middle White Kei	LOW	D: LARGE RISK ALLOWED	D: LARGELY MODIFIED	C: MODERATELY MODIFIED
S10H	EASTERN CAPE	Middle White Kei	LOW	D: LARGE RISK ALLOWED	D: LARGELY MODIFIED	C: MODERATELY MODIFIED
S10J	EASTERN CAPE	Middle White Kei	LOW	D: LARGE RISK ALLOWED	D: LARGELY MODIFIED	C: MODERATELY MODIFIED
S20A	EASTERN CAPE	Upper White Kei	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL
S20B	EASTERN CAPE	Upper White Kei	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL
S20C	EASTERN CAPE	Middle White Kei	LOW	D: LARGE RISK ALLOWED	D: LARGELY MODIFIED	C: MODERATELY MODIFIED
S20D	EASTERN CAPE	Middle White Kei	LOW	D: LARGE RISK ALLOWED	D: LARGELY MODIFIED	C: MODERATELY MODIFIED
S31A	EASTERN CAPE	Upper White Kei	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL
S31B	EASTERN CAPE	Upper White Kei	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL
S31C	EASTERN CAPE	Black Kei	MODERATE	C: MODERATE RISK ALLOWED	D: LARGELY MODIFIED	B: LARGELY NATURAL
S31D	EASTERN CAPE	Lower Black Kei	LOW	D: LARGE RISK ALLOWED	D: LARGELY MODIFIED	B: LARGELY NATURAL
S31E	EASTERN CAPE	Black Kei	MODERATE	C: MODERATE RISK ALLOWED	D: LARGELY MODIFIED	B: LARGELY NATURAL
S31F	EASTERN CAPE	Lower Black Kei	LOW	D: LARGE RISK ALLOWED	D: LARGELY MODIFIED	B: LARGELY NATURAL
S31G	EASTERN CAPE	Black Kei	MODERATE	C: MODERATE RISK ALLOWED	D: LARGELY MODIFIED	B: LARGELY NATURAL
S32A	EASTERN CAPE	Black Kei	MODERATE	C: MODERATE RISK ALLOWED	D: LARGELY MODIFIED	B: LARGELY NATURAL
S32B	EASTERN CAPE	Black Kei	MODERATE	C: MODERATE RISK ALLOWED	D: LARGELY MODIFIED	B: LARGELY NATURAL
S32C	EASTERN CAPE	Black Kei	MODERATE	C: MODERATE RISK ALLOWED	D: LARGELY MODIFIED	B: LARGELY NATURAL
S32D	EASTERN CAPE	Black Kei	MODERATE	C: MODERATE RISK ALLOWED	D: LARGELY MODIFIED	B: LARGELY NATURAL
S32E	EASTERN CAPE	Black Kei	MODERATE	C: MODERATE RISK ALLOWED	D: LARGELY MODIFIED	B: LARGELY NATURAL
S32F	EASTERN CAPE	Black Kei	MODERATE	C: MODERATE RISK ALLOWED	D: LARGELY MODIFIED	B: LARGELY NATURAL
S32G	EASTERN CAPE	Black Kei	MODERATE	C: MODERATE RISK ALLOWED	D: LARGELY MODIFIED	B: LARGELY NATURAL
S32H	EASTERN CAPE	Black Kei	MODERATE	C: MODERATE RISK ALLOWED	D: LARGELY MODIFIED	B: LARGELY NATURAL
S32J	EASTERN CAPE	Lower Black Kei	LOW	D: LARGE RISK ALLOWED	D: LARGELY MODIFIED	B: LARGELY NATURAL
S32K	EASTERN CAPE	Lower Black Kei	LOW	D: LARGE RISK ALLOWED	D: LARGELY MODIFIED	B: LARGELY NATURAL
S32L	EASTERN CAPE	Lower Black Kei	LOW	D: LARGE RISK ALLOWED	D: LARGELY MODIFIED	B: LARGELY NATURAL
S32M	EASTERN CAPE	Lower Black Kei	LOW	D: LARGE RISK ALLOWED	D: LARGELY MODIFIED	B: LARGELY NATURAL
S40A	EASTERN CAPE	Lower Black Kei	LOW	D: LARGE RISK ALLOWED	D: LARGELY MODIFIED	B: LARGELY NATURAL
S40B	EASTERN CAPE	Lower Black Kei	LOW	D: LARGE RISK ALLOWED	D: LARGELY MODIFIED	B: LARGELY NATURAL
S40C	EASTERN CAPE	Lower Black Kei	LOW	D: LARGE RISK ALLOWED	D: LARGELY MODIFIED	B: LARGELY NATURAL
S40D	EASTERN CAPE	Lower Kei	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
S40E	EASTERN CAPE	Lower Kei	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
S40F	EASTERN CAPE	Lower Kei	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
S50A	EASTERN CAPE	Tsomo	LOW	D: LARGE RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL
S50B	EASTERN CAPE	Tsomo	LOW	D: LARGE RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL
S50C	EASTERN CAPE	Tsomo	LOW	D: LARGE RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL
S50D	EASTERN CAPE	Tsomo	LOW	D: LARGE RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL
S50E	EASTERN CAPE	Tsomo	LOW	D: LARGE RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL
S50F	EASTERN CAPE	Lower Tsomo	LOW	D: LARGE RISK ALLOWED	D: LARGELY MODIFIED	B: LARGELY NATURAL
S50G	EASTERN CAPE	Lower Tsomo	LOW	D: LARGE RISK ALLOWED	D: LARGELY MODIFIED	B: LARGELY NATURAL

QUAT.No.	PROVINCE	RIVERS	EISC	DEMC	PESC	BEST AEMC
S50H	EASTERN CAPE	Lower Tsomo	LOW	D: LARGE RISK ALLOWED	D: LARGELY MODIFIED	B: LARGELY NATURAL
S50J	EASTERN CAPE	Lower Tsomo	LOW	D: LARGE RISK ALLOWED	D: LARGELY MODIFIED	B: LARGELY NATURAL
S60A	EASTERN CAPE	Kubusi	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
S60B	EASTERN CAPE	Kubusi	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
S60C	EASTERN CAPE	Kubusi	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
S60D	EASTERN CAPE	Kubusi	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
S60E	EASTERN CAPE	Kubusi	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
S70A	EASTERN CAPE	Lower Kei	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
S70B	EASTERN CAPE	Lower Kei	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
S70C	EASTERN CAPE	Gcuwa	MODERATE	C: MODERATE RISK ALLOWED	D: LARGELY MODIFIED	C: MODERATELY MODIFIED
S70D	EASTERN CAPE	Gcuwa	MODERATE	C: MODERATE RISK ALLOWED	D: LARGELY MODIFIED	C: MODERATELY MODIFIED
S70E	EASTERN CAPE	Gcuwa	MODERATE	C: MODERATE RISK ALLOWED	D: LARGELY MODIFIED	C: MODERATELY MODIFIED
S70F	EASTERN CAPE	Lower Kei	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED

Fig.41: EISC, PESC & AEMC for S10A - S32M

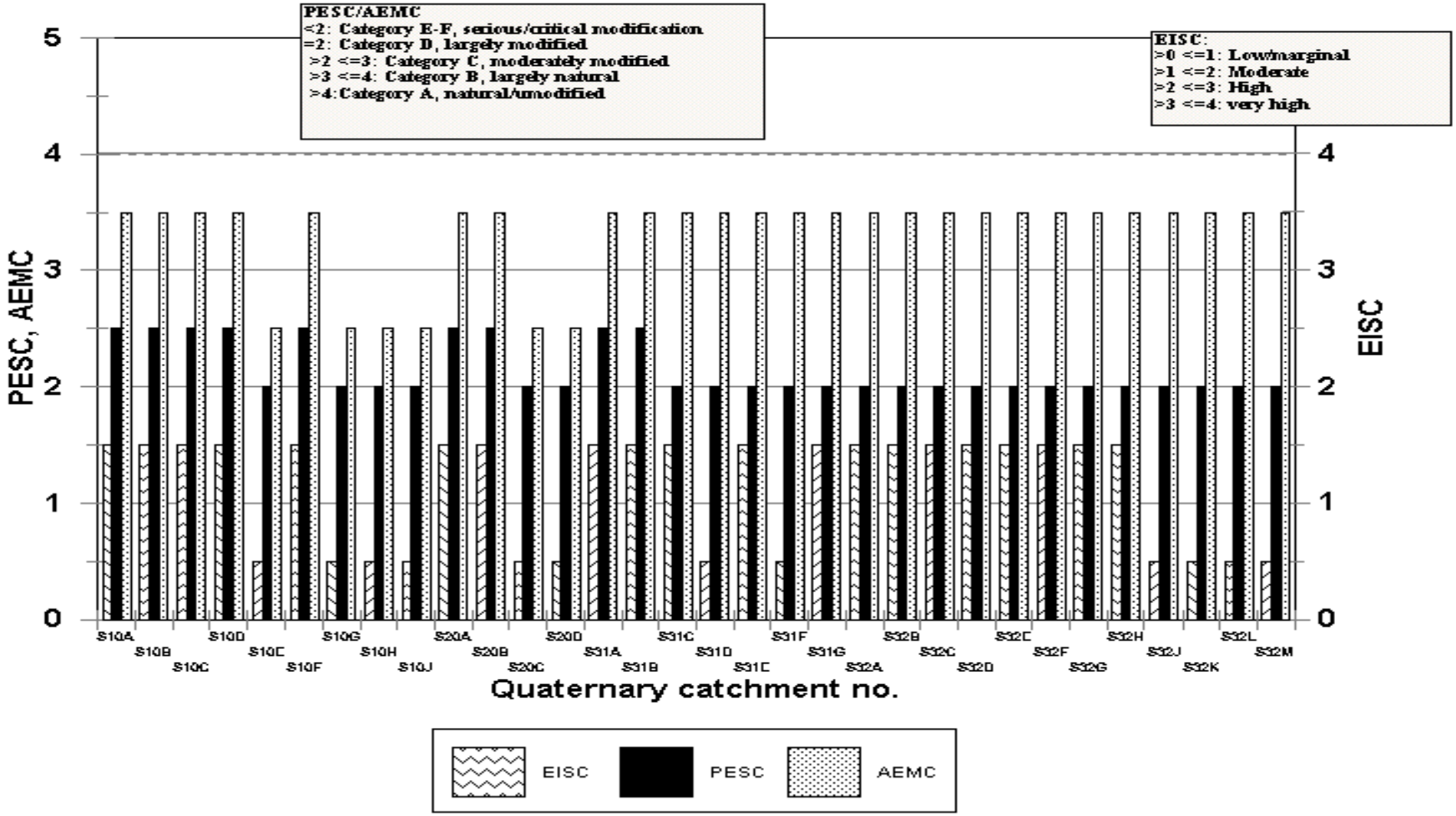


Fig.42: EISC, PESC & AEMC for S40A - S70F

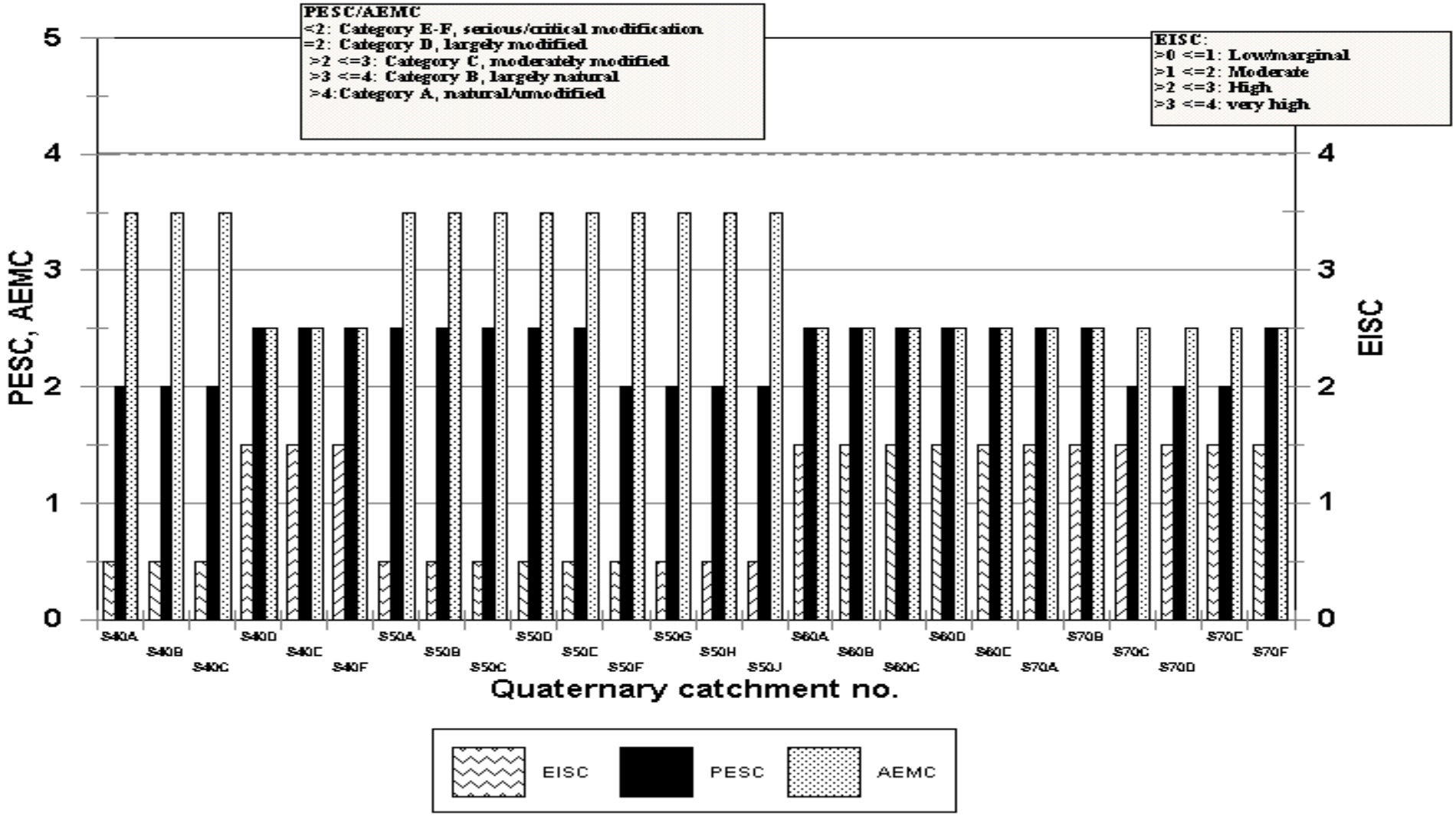


Table 18: Ratings for quaternary catchments of primary drainage T (Fig. 45 – 48).

QUAT.No.	PROVINCE	RIVERS	EISC	DEMC	PESC	BEST AEMC
T11A	KWAZULU-NATAL	not entered T11B info used (CJK)	HIGH	B: SMALL RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
T11B	EASTERN CAPE	Upper Bachee	HIGH	B: SMALL RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
T11C	EASTERN CAPE	Upper Bachee	HIGH	B: SMALL RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
T11D	EASTERN CAPE	Upper Bachee	HIGH	B: SMALL RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
T11E	EASTERN CAPE	Upper Bachee	HIGH	B: SMALL RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
T11F	EASTERN CAPE	Upper Bachee	HIGH	B: SMALL RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
T11G	EASTERN CAPE	Upper Bachee	LOW	D: LARGE RISK ALLOWED	D: LARGELY MODIFIED	B: LARGELY NATURAL
T11H	EASTERN CAPE	Upper Bachee	LOW	D: LARGE RISK ALLOWED	D: LARGELY MODIFIED	B: LARGELY NATURAL
T12A	EASTERN CAPE	Upper Bachee	HIGH	B: SMALL RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
T12B	EASTERN CAPE	Upper Bachee	LOW	D: LARGE RISK ALLOWED	D: LARGELY MODIFIED	B: LARGELY NATURAL
T12C	EASTERN CAPE	Upper Bachee	LOW	D: LARGE RISK ALLOWED	D: LARGELY MODIFIED	B: LARGELY NATURAL
T12D	EASTERN CAPE	Upper Bachee	LOW	D: LARGE RISK ALLOWED	D: LARGELY MODIFIED	B: LARGELY NATURAL
T12E	EASTERN CAPE	Upper Bachee	LOW	D: LARGE RISK ALLOWED	D: LARGELY MODIFIED	B: LARGELY NATURAL
T12F	EASTERN CAPE	Upper Bachee	LOW	D: LARGE RISK ALLOWED	D: LARGELY MODIFIED	B: LARGELY NATURAL
T12G	EASTERN CAPE	Upper Bachee	LOW	D: LARGE RISK ALLOWED	D: LARGELY MODIFIED	B: LARGELY NATURAL
T13A	EASTERN CAPE	Upper Bachee	LOW	D: LARGE RISK ALLOWED	D: LARGELY MODIFIED	B: LARGELY NATURAL
T13B	EASTERN CAPE	Upper Bachee	LOW	D: LARGE RISK ALLOWED	D: LARGELY MODIFIED	B: LARGELY NATURAL
T13C	EASTERN CAPE	Upper Bachee	LOW	D: LARGE RISK ALLOWED	D: LARGELY MODIFIED	B: LARGELY NATURAL
T13D	EASTERN CAPE	Lower Bashee	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL
T13E	EASTERN CAPE	Lower Bashee	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL
T20A	EASTERN CAPE	Middle Mtata	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
T20B	EASTERN CAPE	Middle Mtata	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
T20C	EASTERN CAPE	Lower Ntatu	LOW	D: LARGE RISK ALLOWED	D: LARGELY MODIFIED	D: LARGELY MODIFIED
T20D	EASTERN CAPE	Lower Ntatu	LOW	D: LARGE RISK ALLOWED	D: LARGELY MODIFIED	D: LARGELY MODIFIED
T20E	EASTERN CAPE	Lower Ntatu	LOW	D: LARGE RISK ALLOWED	D: LARGELY MODIFIED	D: LARGELY MODIFIED
T20F	EASTERN CAPE	Ngqunggu	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL
T20G	EASTERN CAPE	Lower Ntatu	LOW	D: LARGE RISK ALLOWED	D: LARGELY MODIFIED	D: LARGELY MODIFIED
T31A	KWAZULU-NATAL	Umzimvubu	MODERATE	C: MODERATE RISK ALLOWED	A: UNMODIFIED, NATURAL	A: UNMODIFIED, NATURAL
T31B	KWAZULU-NATAL	Kromme R source to Umzimvubu confl	MODERATE	C: MODERATE RISK ALLOWED	B: LARGELY NATURAL	A: UNMODIFIED, NATURAL
T31C	KWAZULU-NATAL	Umzimvubu Kromme confl to Taylorville	MODERATE	C: MODERATE RISK ALLOWED	B: LARGELY NATURAL	A: UNMODIFIED, NATURAL
T31D	KWAZULU-NATAL	Umzimvubu, Taylorville to Midgley	LOW	D: LARGE RISK ALLOWED	B: LARGELY NATURAL	A: UNMODIFIED, NATURAL
T31E	KWAZULU-NATAL	Umzimvubu tributary	LOW	D: LARGE RISK ALLOWED	B: LARGELY NATURAL	A: UNMODIFIED, NATURAL
T31F	KWAZULU-NATAL	Umzimvubu Cedarville	LOW	D: LARGE RISK ALLOWED	A: UNMODIFIED, NATURAL	A: UNMODIFIED, NATURAL
T31G	KWAZULU-NATAL	?	MODERATE	C: MODERATE RISK ALLOWED	A: UNMODIFIED, NATURAL	A: UNMODIFIED, NATURAL
T31H	KWAZULU-NATAL	Mvenyane	LOW	D: LARGE RISK ALLOWED	B: LARGELY NATURAL	A: UNMODIFIED, NATURAL
T31J	KWAZULU-NATAL	??	MODERATE	C: MODERATE RISK ALLOWED	A: UNMODIFIED, NATURAL	A: UNMODIFIED, NATURAL
T32A	KWAZULU-NATAL	Umzimhlava upstream of Swartberg	LOW	D: LARGE RISK ALLOWED	A: UNMODIFIED, NATURAL	A: UNMODIFIED, NATURAL
T32B	KWAZULU-NATAL	Umzimhlava, Swartberg to Franklin	MODERATE	C: MODERATE RISK ALLOWED	A: UNMODIFIED, NATURAL	A: UNMODIFIED, NATURAL
T32C	KWAZULU-NATAL	Mzimhlava Franklin to Kokstad	MODERATE	C: MODERATE RISK ALLOWED	A: UNMODIFIED, NATURAL	A: UNMODIFIED, NATURAL

QUAT.No.	PROVINCE	RIVERS	EISC	DEMC	PESC	BEST AEMC
T32D	KWAZULU-NATAL	Mzimhlava below Kokstad	MODERATE	C: MODERATE RISK ALLOWED	B: LARGELY NATURAL	A: UNMODIFIED, NATURAL
T32E	EASTERN CAPE	Umzimtlava	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
T32F	EASTERN CAPE	Upper Umzimvubu	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL
T32G	EASTERN CAPE	Upper Umzimvubu	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL
T32H	EASTERN CAPE	Upper Umzimvubu	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL
T33A	EASTERN CAPE	Upper Ntata, Umzimvubu (based on rivers around Ugi and McClear)	HIGH	B: SMALL RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL
T33B	EASTERN CAPE	Upper Ntata, Umzimvubu (based on rivers around Ugi and McClear)	HIGH	B: SMALL RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL
T33C	EASTERN CAPE	Upper Ntata, Umzimvubu (based on rivers around Ugi and McClear)	HIGH	B: SMALL RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL
T33D	EASTERN CAPE	Upper Ntata, Umzimvubu (based on rivers around Ugi and McClear)	HIGH	B: SMALL RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL
T33E	EASTERN CAPE	Upper Ntata, Umzimvubu (based on rivers around Ugi and McClear)	HIGH	B: SMALL RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL
T33F	EASTERN CAPE	Upper Ntata, Umzimvubu (based on rivers around Ugi and McClear)	HIGH	B: SMALL RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL
T33G	EASTERN CAPE	Upper Umzimvubu	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL
T33H	EASTERN CAPE	Upper Umzimvubu	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL
T33J	EASTERN CAPE	Upper Umzimvubu	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL
T33K	EASTERN CAPE	not entered - use T32H info (CJK)	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL
T34A	EASTERN CAPE	Upper Ntata, Umzimvubu (based on rivers around Ugi and McClear)	HIGH	B: SMALL RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL
T34B	EASTERN CAPE	Upper Ntata, Umzimvubu (based on rivers around Ugi and McClear)	HIGH	B: SMALL RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL
T34C	EASTERN CAPE	Upper Ntata, Umzimvubu (based on rivers around Ugi and McClear)	HIGH	B: SMALL RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL

QUAT.No.	PROVINCE	RIVERS	EISC	DEMC	PESC	BEST AEMC
T34D	EASTERN CAPE	Upper Ntata, Umzimvubu (based on rivers around Ugi and McClear)	HIGH	B: SMALL RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL
T34E	EASTERN CAPE	Upper Ntata, Umzimvubu (based on rivers around Ugi and McClear)	HIGH	B: SMALL RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL
T34F	EASTERN CAPE	Upper Ntata, Umzimvubu (based on rivers around Ugi and McClear)	HIGH	B: SMALL RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL
T34G	EASTERN CAPE	Upper Ntata, Umzimvubu (based on rivers around Ugi and McClear)	HIGH	B: SMALL RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL
T34H	EASTERN CAPE	Upper Umzimvubu	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL
T34J	EASTERN CAPE	Upper Umzimvubu	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL
T34K	EASTERN CAPE	Upper Umzimvubu	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL
T35A	EASTERN CAPE	Upper Ntata, Umzimvubu (based on rivers around Ugi and McClear)	HIGH	B: SMALL RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL
T35B	EASTERN CAPE	Upper Ntata, Umzimvubu (based on rivers around Ugi and McClear)	HIGH	B: SMALL RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL
T35C	EASTERN CAPE	Upper Ntata, Umzimvubu (based on rivers around Ugi and McClear)	HIGH	B: SMALL RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL
T35D	EASTERN CAPE	Upper Ntata, Umzimvubu (based on rivers around Ugi and McClear)	HIGH	B: SMALL RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL
T35E	EASTERN CAPE	Upper Ntata, Umzimvubu (based on rivers around Ugi and McClear)	HIGH	B: SMALL RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL
T35F	EASTERN CAPE	Upper Ntata, Umzimvubu (based on rivers around Ugi and McClear)	HIGH	B: SMALL RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL
T35G	EASTERN CAPE	Upper Ntata, Umzimvubu (based on rivers around Ugi and McClear)	HIGH	B: SMALL RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL

QUAT.No.	PROVINCE	RIVERS	EISC	DEMC	PESC	BEST AEMC
T35H	EASTERN CAPE	Upper Ntata, Umzimvubu (based on rivers around Ugi and McClear)	HIGH	B: SMALL RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL
T35J	EASTERN CAPE	not entered use T35H INFO (CJK)	HIGH	B: SMALL RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL
T35K	EASTERN CAPE	Upper Umzimvubu	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL
T35L	EASTERN CAPE	Upper Umzimvubu	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL
T35M	EASTERN CAPE	Upper Umzimvubu	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL
T36A	EASTERN CAPE	Lower Umzimvubu	MODERATE	C: MODERATE RISK ALLOWED	B: LARGELY NATURAL	B: LARGELY NATURAL
T36B	EASTERN CAPE	Lower Umzimvubu	MODERATE	C: MODERATE RISK ALLOWED	B: LARGELY NATURAL	B: LARGELY NATURAL
T40A	KWAZULU-NATAL	MTAMVUNA	MODERATE	C: MODERATE RISK ALLOWED	B: LARGELY NATURAL	B: LARGELY NATURAL
T40B	KWAZULU-NATAL	WEZA	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
T40C	KWAZULU-NATAL	LUDEKE	MODERATE	C: MODERATE RISK ALLOWED	B: LARGELY NATURAL	A: UNMODIFIED, NATURAL
T40D	KWAZULU-NATAL	MTAMVUNA	MODERATE	C: MODERATE RISK ALLOWED	B: LARGELY NATURAL	A: UNMODIFIED, NATURAL
T40E	KWAZULU-NATAL	MTAMVUNA	HIGH	B: SMALL RISK ALLOWED	B: LARGELY NATURAL	A: UNMODIFIED, NATURAL
T40F	KWAZULU-NATAL	MBIZANA	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
T40G	KWAZULU-NATAL	ZOTSHA?	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL
T51A	KWAZULU-NATAL	MZIMUTI source to Mzinkulu conf	HIGH	B: SMALL RISK ALLOWED	A: UNMODIFIED, NATURAL	A: UNMODIFIED, NATURAL
T51B	KWAZULU-NATAL	MZIMKULU	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
T51C	KWAZULU-NATAL	MZIMKULU, Underberg to Centocow	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
T51D	KWAZULU-NATAL	POLELA	HIGH	B: SMALL RISK ALLOWED	B: LARGELY NATURAL	B: LARGELY NATURAL
T51E	KWAZULU-NATAL	Polela, Himeville to Umzimkulu confl.	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
T51F	KWAZULU-NATAL	Ngwangwane, source to Ndowane confl.	MODERATE	C: MODERATE RISK ALLOWED	B: LARGELY NATURAL	B: LARGELY NATURAL
T51G	KWAZULU-NATAL	Ndowane to ngwangwane confluence	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL
T51H	KWAZULU-NATAL	Ngununu	LOW	D: LARGE RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL
T51J	KWAZULU-NATAL	Ngwagwane	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL
T52A	KWAZULU-NATAL	Mzimkulu Polela to Cubane	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL
T52B	KWAZULU-NATAL	Cubane trib of Mzimkulu	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	A: UNMODIFIED, NATURAL
T52C	KWAZULU-NATAL	Mzimkulu, Cabane confl to Umzimkulu village	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL
T52D	KWAZULU-NATAL	Mzimkulu, village to Bisi confl.	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL
T52E	KWAZULU-NATAL	Bisi source to Little Bisi confl	LOW	D: LARGE RISK ALLOWED	C: MODERATELY MODIFIED	A: UNMODIFIED, NATURAL
T52F	KWAZULU-NATAL	Little Bisi to Bisi Confl.	LOW	D: LARGE RISK ALLOWED	C: MODERATELY MODIFIED	A: UNMODIFIED, NATURAL
T52G	KWAZULU-NATAL	Bisi, L Bisi confl to R 56 road	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	A: UNMODIFIED, NATURAL
T52H	KWAZULU-NATAL		MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	A: UNMODIFIED, NATURAL

QUAT.No.	PROVINCE	RIVERS	EISC	DEMC	PESC	BEST AEMC
T52J	KWAZULU-NATAL	Mzimkulu, Bisi confl to Tengwe confl	MODERATE	C: MODERATE RISK ALLOWED	B: LARGELY NATURAL	A: UNMODIFIED, NATURAL
T52K	KWAZULU-NATAL	Umzimkulwane source to top of Oribi Gorge	MODERATE	C: MODERATE RISK ALLOWED	D: LARGELY MODIFIED	D: LARGELY MODIFIED
T52L	KWAZULU-NATAL	Mzimkulwane in Oribi Gorge	HIGH	B: SMALL RISK ALLOWED	B: LARGELY NATURAL	B: LARGELY NATURAL
T52M	KWAZULU-NATAL	Mzimkulu Tengwane confl to estuary	HIGH	B: SMALL RISK ALLOWED	B: LARGELY NATURAL	A: UNMODIFIED, NATURAL
T60A	EASTERN CAPE	Eastern Pondoland coastal area	VERY HIGH	A: NO HUMAN HAZARDS	B: LARGELY NATURAL	B: LARGELY NATURAL
T60B	EASTERN CAPE	Eastern Pondoland coastal area	VERY HIGH	A: NO HUMAN HAZARDS	B: LARGELY NATURAL	B: LARGELY NATURAL
T60C	EASTERN CAPE	Eastern Pondoland coastal area	VERY HIGH	A: NO HUMAN HAZARDS	B: LARGELY NATURAL	B: LARGELY NATURAL
T60D	EASTERN CAPE	Eastern Pondoland coastal area	VERY HIGH	A: NO HUMAN HAZARDS	B: LARGELY NATURAL	B: LARGELY NATURAL
T60E	EASTERN CAPE	Eastern Pondoland coastal area	VERY HIGH	A: NO HUMAN HAZARDS	B: LARGELY NATURAL	B: LARGELY NATURAL
T60F	EASTERN CAPE	Eastern Pondoland coastal area	VERY HIGH	A: NO HUMAN HAZARDS	B: LARGELY NATURAL	B: LARGELY NATURAL
T60G	EASTERN CAPE	Eastern Pondoland coastal area	VERY HIGH	A: NO HUMAN HAZARDS	B: LARGELY NATURAL	B: LARGELY NATURAL
T60H	EASTERN CAPE	Eastern Pondoland coastal area	VERY HIGH	A: NO HUMAN HAZARDS	B: LARGELY NATURAL	B: LARGELY NATURAL
T60J	EASTERN CAPE	Eastern Pondoland coastal area	VERY HIGH	A: NO HUMAN HAZARDS	B: LARGELY NATURAL	B: LARGELY NATURAL
T60K	EASTERN CAPE	Eastern Pondoland coastal area	VERY HIGH	A: NO HUMAN HAZARDS	B: LARGELY NATURAL	B: LARGELY NATURAL
T70A	EASTERN CAPE		HIGH	B: SMALL RISK ALLOWED	B: LARGELY NATURAL	B: LARGELY NATURAL
T70B	EASTERN CAPE		HIGH	B: SMALL RISK ALLOWED	B: LARGELY NATURAL	B: LARGELY NATURAL
T70C	EASTERN CAPE		HIGH	B: SMALL RISK ALLOWED	B: LARGELY NATURAL	B: LARGELY NATURAL
T70D	EASTERN CAPE		HIGH	B: SMALL RISK ALLOWED	B: LARGELY NATURAL	B: LARGELY NATURAL
T70E	EASTERN CAPE		HIGH	B: SMALL RISK ALLOWED	B: LARGELY NATURAL	B: LARGELY NATURAL
T70F	EASTERN CAPE		HIGH	B: SMALL RISK ALLOWED	B: LARGELY NATURAL	B: LARGELY NATURAL
T70G	EASTERN CAPE		HIGH	B: SMALL RISK ALLOWED	B: LARGELY NATURAL	B: LARGELY NATURAL
T80A	EASTERN CAPE		HIGH	B: SMALL RISK ALLOWED	B: LARGELY NATURAL	B: LARGELY NATURAL
T80B	EASTERN CAPE		HIGH	B: SMALL RISK ALLOWED	B: LARGELY NATURAL	B: LARGELY NATURAL
T80C	EASTERN CAPE		HIGH	B: SMALL RISK ALLOWED	B: LARGELY NATURAL	B: LARGELY NATURAL
T80D	EASTERN CAPE		HIGH	B: SMALL RISK ALLOWED	B: LARGELY NATURAL	B: LARGELY NATURAL
T90A	EASTERN CAPE		HIGH	B: SMALL RISK ALLOWED	B: LARGELY NATURAL	B: LARGELY NATURAL
T90B	EASTERN CAPE		HIGH	B: SMALL RISK ALLOWED	B: LARGELY NATURAL	B: LARGELY NATURAL
T90C	EASTERN CAPE		HIGH	B: SMALL RISK ALLOWED	B: LARGELY NATURAL	B: LARGELY NATURAL
T90D	EASTERN CAPE		HIGH	B: SMALL RISK ALLOWED	B: LARGELY NATURAL	B: LARGELY NATURAL
T90E	EASTERN CAPE		HIGH	B: SMALL RISK ALLOWED	B: LARGELY NATURAL	B: LARGELY NATURAL
T90F	EASTERN CAPE		HIGH	B: SMALL RISK ALLOWED	B: LARGELY NATURAL	B: LARGELY NATURAL
T90G	EASTERN CAPE		HIGH	B: SMALL RISK ALLOWED	B: LARGELY NATURAL	B: LARGELY NATURAL

Fig.43: EISC, PESC & AEMC for T11A - T31J

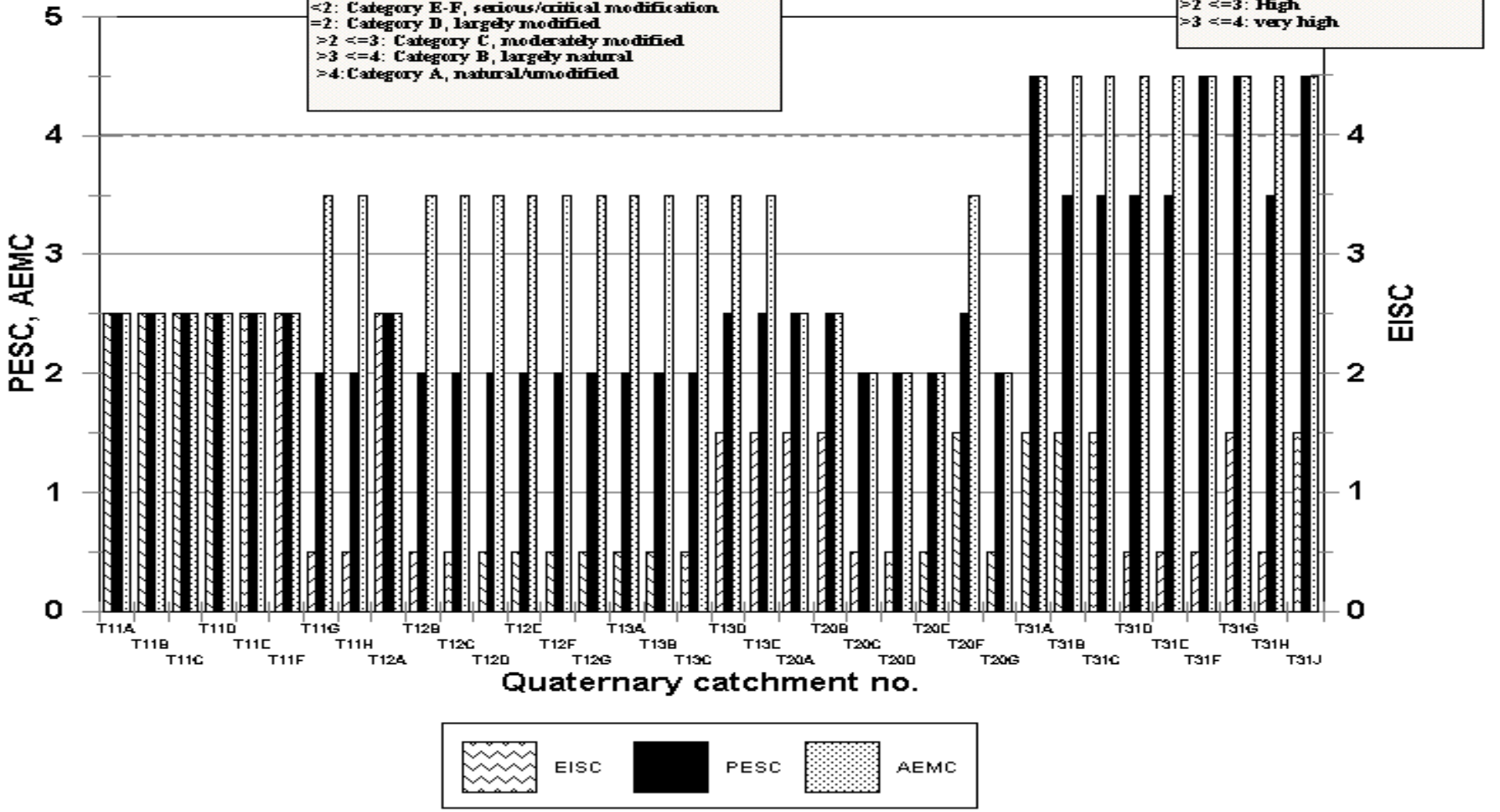


Fig.44: EISC, PESC & AEMC for T32A - T35M

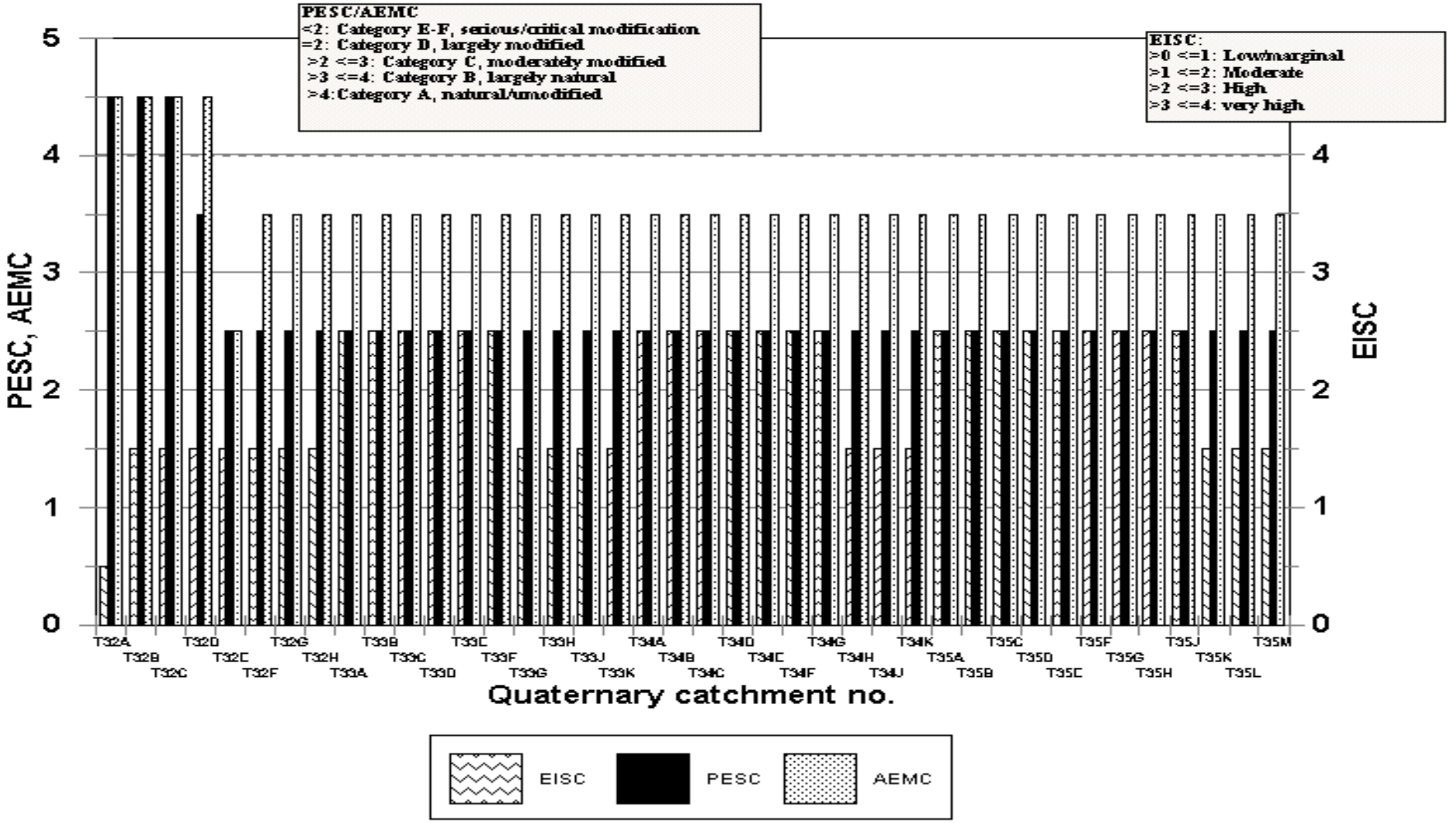


Fig.45: EISC, PESC & AEMC for T36A - T60K

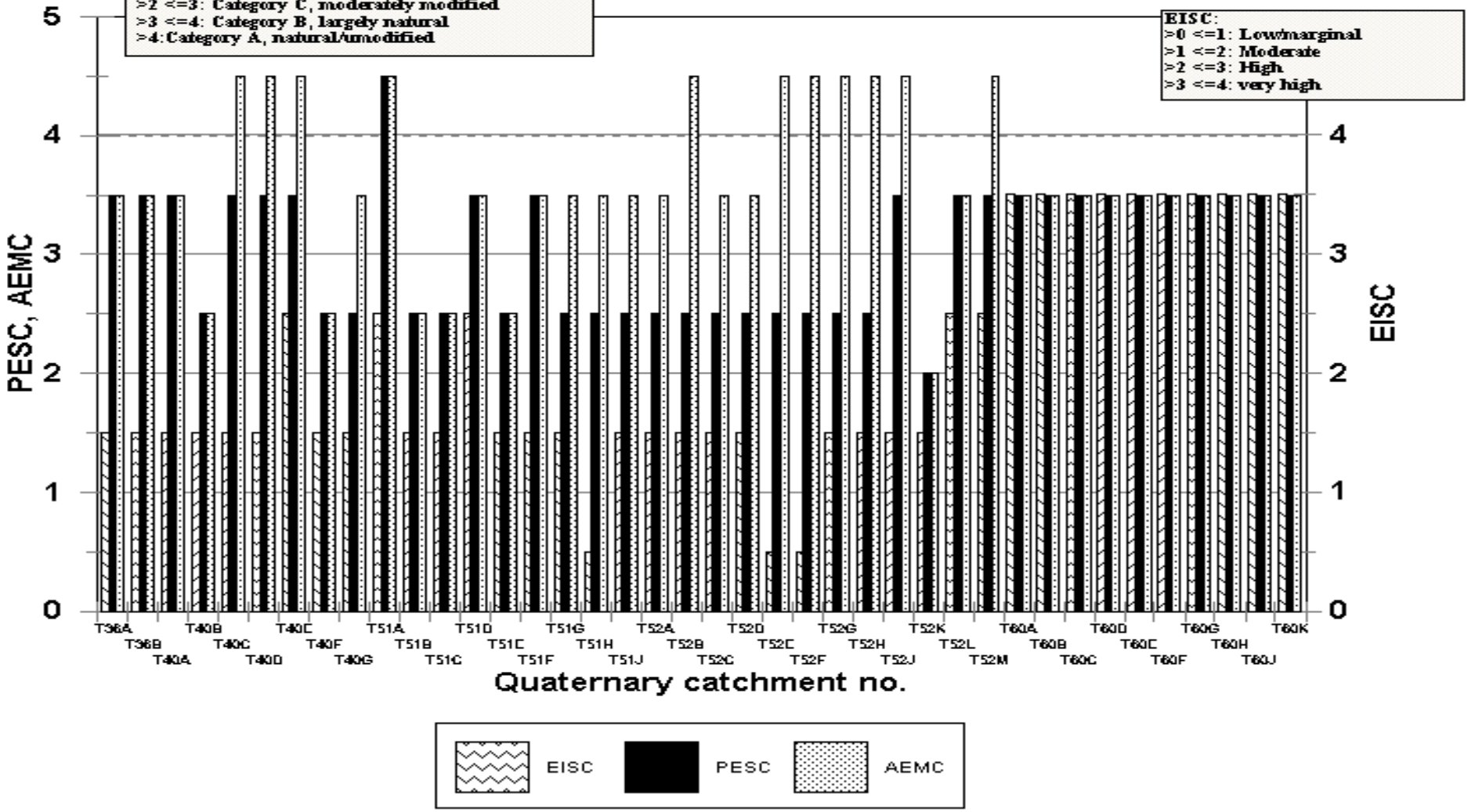


Fig.46: EISC, PESC & AEMC for T70A - T90G

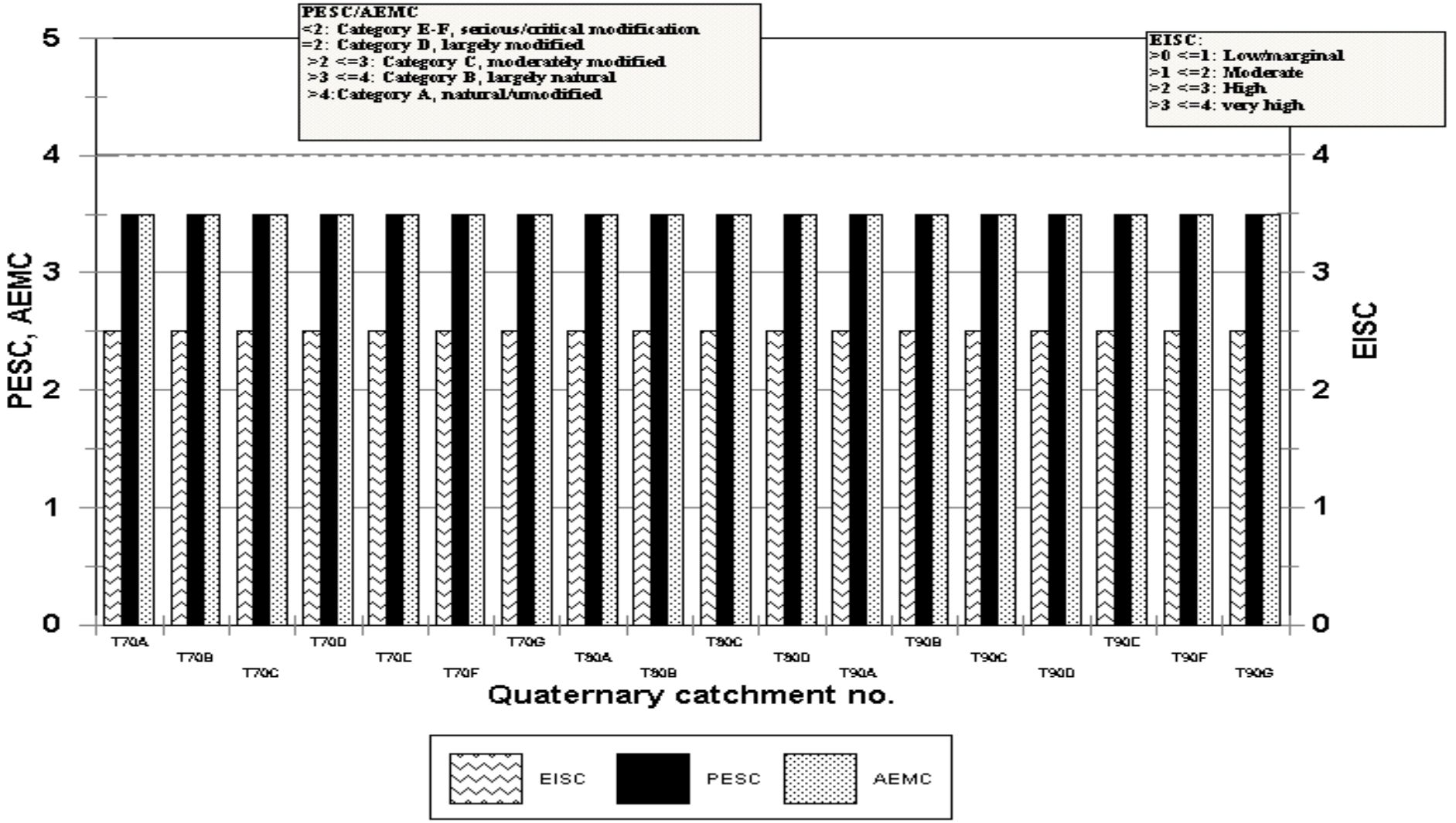


Table 19: Ratings for quaternary catchments of primary drainage U (Fig. 49 - 50).

QUAT.No.	PROVINCE	RIVERS	EISC	DEMC	PESC	BEST AEMC
U10A	KWAZULU-NATAL	MKOMZANA	HIGH	B: SMALL RISK ALLOWED	B: LARGELY NATURAL	A: UNMODIFIED, NATURAL
U10B	KWAZULU-NATAL	MKOMAZI	HIGH	B: SMALL RISK ALLOWED	B: LARGELY NATURAL	A: UNMODIFIED, NATURAL
U10C	KWAZULU-NATAL	MKOMAZANA	HIGH	B: SMALL RISK ALLOWED	B: LARGELY NATURAL	A: UNMODIFIED, NATURAL
U10D	KWAZULU-NATAL	INZINGA	HIGH	B: SMALL RISK ALLOWED	B: LARGELY NATURAL	A: UNMODIFIED, NATURAL
U10E	KWAZULU-NATAL	MKUMAZI	HIGH	B: SMALL RISK ALLOWED	B: LARGELY NATURAL	A: UNMODIFIED, NATURAL
U10F	KWAZULU-NATAL	MKUMAZI	HIGH	B: SMALL RISK ALLOWED	B: LARGELY NATURAL	A: UNMODIFIED, NATURAL
U10G	KWAZULU-NATAL	MKUMAZI	HIGH	B: SMALL RISK ALLOWED	B: LARGELY NATURAL	A: UNMODIFIED, NATURAL
U10H	KWAZULU-NATAL	MKUMAZI	HIGH	B: SMALL RISK ALLOWED	B: LARGELY NATURAL	A: UNMODIFIED, NATURAL
U10J	KWAZULU-NATAL	MKOMAZI	VERY HIGH	A: NO HUMAN HAZARDS	B: LARGELY NATURAL	B: LARGELY NATURAL
U10K	KWAZULU-NATAL	LUFAFA	HIGH	B: SMALL RISK ALLOWED	B: LARGELY NATURAL	A: UNMODIFIED, NATURAL
U10L	KWAZULU-NATAL	MKUMAZI	HIGH	B: SMALL RISK ALLOWED	B: LARGELY NATURAL	B: LARGELY NATURAL
U10M	KWAZULU-NATAL	MKUMAZI	HIGH	B: SMALL RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL
U20A	KWAZULU-NATAL	MGENI	HIGH	B: SMALL RISK ALLOWED	B: LARGELY NATURAL	A: UNMODIFIED, NATURAL
U20B	KWAZULU-NATAL	LIONS	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
U20C	KWAZULU-NATAL	MGENI	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL
U20D	KWAZULU-NATAL	KARKLOOF RIVER	HIGH	B: SMALL RISK ALLOWED	B: LARGELY NATURAL	B: LARGELY NATURAL
U20E	KWAZULU-NATAL	MGENI	HIGH	B: SMALL RISK ALLOWED	C: MODERATELY MODIFIED	A: UNMODIFIED, NATURAL
U20F	KWAZULU-NATAL	MPOLWENI	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
U20G	KWAZULU-NATAL	MGENI	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
U20H	KWAZULU-NATAL	MZUNDUZI	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL
U20J	KWAZULU-NATAL	MZUNDUZI	MODERATE	C: MODERATE RISK ALLOWED	D: LARGELY MODIFIED	C: MODERATELY MODIFIED
U20K	KWAZULU-NATAL	MQUEKU	HIGH	B: SMALL RISK ALLOWED	B: LARGELY NATURAL	B: LARGELY NATURAL
U20L	KWAZULU-NATAL	MGENI	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL
U20M	KWAZULU-NATAL	MGENI	MODERATE	C: MODERATE RISK ALLOWED	D: LARGELY MODIFIED	C: MODERATELY MODIFIED
U30A	KWAZULU-NATAL	Mdhloti source to Hazelmere Dam	MODERATE	C: MODERATE RISK ALLOWED	B: LARGELY NATURAL	A: UNMODIFIED, NATURAL
U30B	KWAZULU-NATAL	Mdloti, Hazelmere D to estuary	MODERATE	C: MODERATE RISK ALLOWED	D: LARGELY MODIFIED	C: MODERATELY MODIFIED
U30C	KWAZULU-NATAL	Tongaat, source to Mona confl..	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
U30D	KWAZULU-NATAL	Tongaat Mona to estuary	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	E - F: > E NOT ATTAINABLE IN 5 YR - USE D AS DEFAULT
U30E	KWAZULU-NATAL	Umhlali R	HIGH	B: SMALL RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
U40A	KWAZULU-NATAL	Umvoti, source to Mispah	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
U40B	KWAZULU-NATAL	Mvoti to head of Umvoti gorge	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
U40C	KWAZULU-NATAL	Ikamanzi to Umvoti confl	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
U40D	KWAZULU-NATAL	Umvoti, head of Umvoti gorge to near Mt Elias	HIGH	B: SMALL RISK ALLOWED	B: LARGELY NATURAL	B: LARGELY NATURAL
U40E	KWAZULU-NATAL	Umvoti, Mt Elias to Hlimbitwe confl.	MODERATE	C: MODERATE RISK ALLOWED	B: LARGELY NATURAL	A: UNMODIFIED, NATURAL
U40F	KWAZULU-NATAL	Upper Hlimbitwa	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
U40G	KWAZULU-NATAL	Lower Hlimbitwa	MODERATE	C: MODERATE RISK ALLOWED	B: LARGELY NATURAL	B: LARGELY NATURAL
U40H	KWAZULU-NATAL	Umvoti Hlimbitwa confl to Glen Mill	MODERATE	C: MODERATE RISK ALLOWED	B: LARGELY NATURAL	B: LARGELY NATURAL

QUAT.No.	PROVINCE	RIVERS	EISC	DEMC	PESC	BEST AEMC
U40J	KWAZULU-NATAL	Umvoti Glen Mill to estuary	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
U50A	KWAZULU-NATAL	Whole Nonoti catchment	HIGH	B: SMALL RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
U60A	KWAZULU-NATAL	Mlaas headwaters	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
U60B	KWAZULU-NATAL	Umlaas Baynesfield to Tala valley	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL
U60C	KWAZULU-NATAL	Umlaas Tala to Shongweni	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
U60D	KWAZULU-NATAL	Mlaas shongweni to inland end of Mlaas canal	MODERATE	C: MODERATE RISK ALLOWED	D: LARGELY MODIFIED	B: LARGELY NATURAL
U60E	KWAZULU-NATAL	MBOKODWENI	MODERATE	C: MODERATE RISK ALLOWED	B: LARGELY NATURAL	B: LARGELY NATURAL
U60F	KWAZULU-NATAL	MHLATUZANA	MODERATE	C: MODERATE RISK ALLOWED	D: LARGELY MODIFIED	B: LARGELY NATURAL
U70A	KWAZULU-NATAL	Lovu, source to Richmond	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
U70B	KWAZULU-NATAL	Lovu, Richmond to 30 degrees south	MODERATE	C: MODERATE RISK ALLOWED	B: LARGELY NATURAL	B: LARGELY NATURAL
U70C	KWAZULU-NATAL	Lovu	HIGH	B: SMALL RISK ALLOWED	B: LARGELY NATURAL	A: UNMODIFIED, NATURAL
U70D	KWAZULU-NATAL	Lovu Coastal	MODERATE	C: MODERATE RISK ALLOWED	B: LARGELY NATURAL	B: LARGELY NATURAL
U70E	KWAZULU-NATAL	Mgababa	MODERATE	C: MODERATE RISK ALLOWED	B: LARGELY NATURAL	B: LARGELY NATURAL
U70F	KWAZULU-NATAL	Amanzimtoti	MODERATE	C: MODERATE RISK ALLOWED	B: LARGELY NATURAL	A: UNMODIFIED, NATURAL
U80A	KWAZULU-NATAL	MTENTWENI	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
U80B	KWAZULU-NATAL	Umzumbe to NE of Kwadeshula	MODERATE	C: MODERATE RISK ALLOWED	B: LARGELY NATURAL	A: UNMODIFIED, NATURAL
U80C	KWAZULU-NATAL	Umzumbe NE of kwadushula to sea	MODERATE	C: MODERATE RISK ALLOWED	B: LARGELY NATURAL	A: UNMODIFIED, NATURAL
U80D	KWAZULU-NATAL	MFAZAZANE	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
U80E	KWAZULU-NATAL	Mtwalume source to Qaha confl	MODERATE	C: MODERATE RISK ALLOWED	B: LARGELY NATURAL	A: UNMODIFIED, NATURAL
U80F	KWAZULU-NATAL	Mtwalume, Qaha confl to sea	MODERATE	C: MODERATE RISK ALLOWED	B: LARGELY NATURAL	A: UNMODIFIED, NATURAL
U80G	KWAZULU-NATAL	FAFA	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
U80H	KWAZULU-NATAL	MKUMBANE	MODERATE	C: MODERATE RISK ALLOWED	D: LARGELY MODIFIED	C: MODERATELY MODIFIED
U80J	KWAZULU-NATAL	Umpambanyoni, source to Mquha confl	MODERATE	C: MODERATE RISK ALLOWED	B: LARGELY NATURAL	A: UNMODIFIED, NATURAL
U80K	KWAZULU-NATAL		MODERATE	C: MODERATE RISK ALLOWED	B: LARGELY NATURAL	A: UNMODIFIED, NATURAL
U80L	KWAZULU-NATAL	MAHLONGWA	MODERATE	C: MODERATE RISK ALLOWED	B: LARGELY NATURAL	B: LARGELY NATURAL

Fig.47: EISC, PESC & AEMC for U10A - U30E

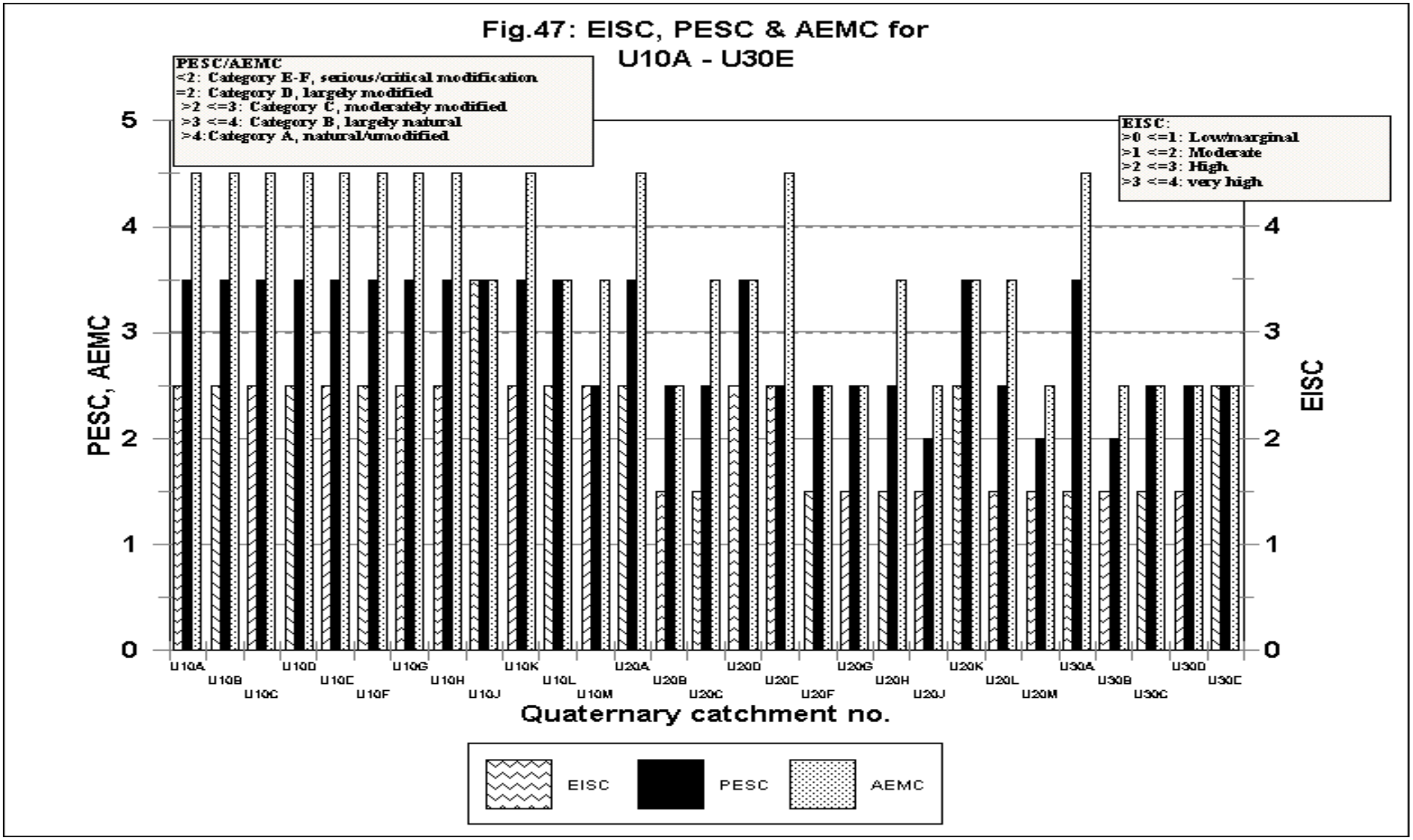


Fig.48: EISC, PESC & AEMC for U40A - U80L

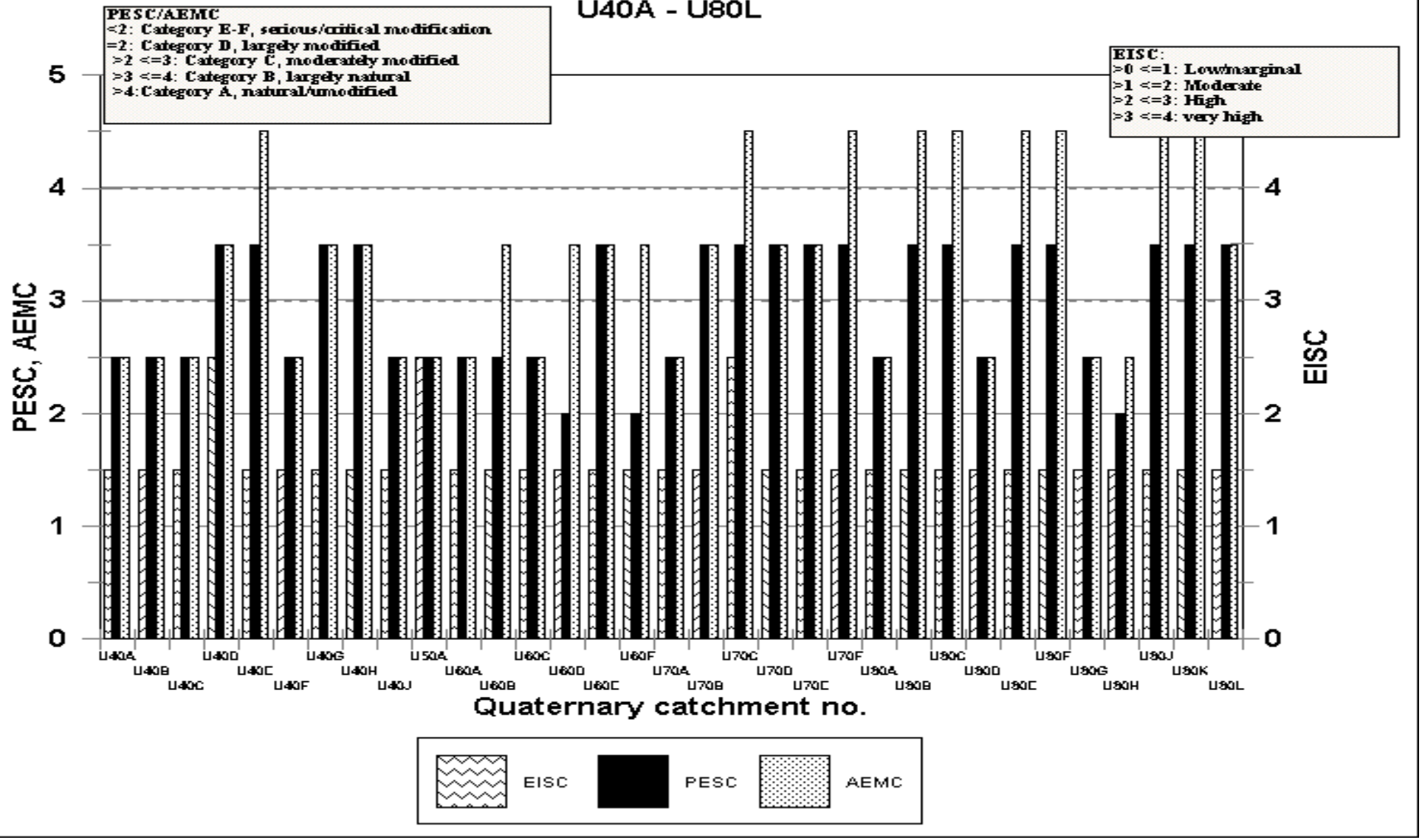


Table 20: Ratings for quaternary catchments of primary drainage V (Fig. 51 - 53).

QUAT.No.	PROVINCE	RIVERS	EISC	DEMC	PESC	BEST AEMC
V11A	KWAZULU-NATAL	THUKELA	HIGH	B: SMALL RISK ALLOWED	B: LARGELY NATURAL	A: UNMODIFIED, NATURAL
V11B	KWAZULU-NATAL	MWENI	MODERATE	C: MODERATE RISK ALLOWED	B: LARGELY NATURAL	A: UNMODIFIED, NATURAL
V11C	KWAZULU-NATAL	THUKELA	HIGH	B: SMALL RISK ALLOWED	B: LARGELY NATURAL	B: LARGELY NATURAL
V11D	KWAZULU-NATAL	THUKELA - WOODSTOCK DAM	INVALID ENTRIES	WRONG ENTRY	E - F: NOT AN ACCEPTABLE	E - F: > E NOT ATTAINABLE IN 5 YR - USE D AS DEFAULT
V11E	KWAZULU-NATAL	LOWER MWENI	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	A: UNMODIFIED, NATURAL
V11F	KWAZULU-NATAL	SANDSPRUIT	LOW	D: LARGE RISK ALLOWED	C: MODERATELY MODIFIED	A: UNMODIFIED, NATURAL
V11G	KWAZULU-NATAL	MLAMBONJA	HIGH	B: SMALL RISK ALLOWED	A: UNMODIFIED, NATURAL	A: UNMODIFIED, NATURAL
V11H	KWAZULU-NATAL	MLAMBONJA	HIGH	B: SMALL RISK ALLOWED	C: MODERATELY MODIFIED	A: UNMODIFIED, NATURAL
V11J	KWAZULU-NATAL	THUKELA	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
V11K	KWAZULU-NATAL	VENTERSPRUIT	LOW	D: LARGE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
V11L	KWAZULU-NATAL	THUKELA	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
V11M	KWAZULU-NATAL	THUKELA	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
V12A	KWAZULU-NATAL	KLIP RIVER	MODERATE	C: MODERATE RISK ALLOWED	B: LARGELY NATURAL	A: UNMODIFIED, NATURAL
V12B	KWAZULU-NATAL	MHLWANE	MODERATE	C: MODERATE RISK ALLOWED	B: LARGELY NATURAL	A: UNMODIFIED, NATURAL
V12C	KWAZULU-NATAL	KLIP RIVER	MODERATE	C: MODERATE RISK ALLOWED	B: LARGELY NATURAL	A: UNMODIFIED, NATURAL
V12D	KWAZULU-NATAL	SANDSPRUIT	MODERATE	C: MODERATE RISK ALLOWED	B: LARGELY NATURAL	A: UNMODIFIED, NATURAL
V12E	KWAZULU-NATAL	SANDSPRUIT	MODERATE	C: MODERATE RISK ALLOWED	B: LARGELY NATURAL	A: UNMODIFIED, NATURAL
V12F	KWAZULU-NATAL	KLIP RIVER	MODERATE	C: MODERATE RISK ALLOWED	B: LARGELY NATURAL	B: LARGELY NATURAL
V12G	KWAZULU-NATAL	KLIP RIVER	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL
V13A	KWAZULU-NATAL	LITTLE TUGELA	HIGH	B: SMALL RISK ALLOWED	A: UNMODIFIED, NATURAL	A: UNMODIFIED, NATURAL
V13B	KWAZULU-NATAL	STERKSPRUIT	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
V13C	KWAZULU-NATAL	LITTLE TUGELA	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL
V13D	KWAZULU-NATAL	LINDEQUES SPRUIT	MODERATE	C: MODERATE RISK ALLOWED	B: LARGELY NATURAL	A: UNMODIFIED, NATURAL
V13E	KWAZULU-NATAL	LITTLE TUGELA	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
V14A	KWAZULU-NATAL	Thukela, L thukela confl to Colenso	MODERATE	C: MODERATE RISK ALLOWED	B: LARGELY NATURAL	B: LARGELY NATURAL
V14B	KWAZULU-NATAL	Thukela, Colenso to Klip confl	HIGH	B: SMALL RISK ALLOWED	B: LARGELY NATURAL	B: LARGELY NATURAL
V14C	KWAZULU-NATAL	Upper Bloukrans to Frere	LOW	D: LARGE RISK ALLOWED	B: LARGELY NATURAL	A: UNMODIFIED, NATURAL
V14D	KWAZULU-NATAL	Bloukrans Frere to Thukela confl	LOW	D: LARGE RISK ALLOWED	A: UNMODIFIED, NATURAL	A: UNMODIFIED, NATURAL
V14E	KWAZULU-NATAL	Thukela, Klip to Bushmans confl ence	HIGH	B: SMALL RISK ALLOWED	B: LARGELY NATURAL	B: LARGELY NATURAL
V20A	KWAZULU-NATAL	Mooi	VERY HIGH	A: NO HUMAN HAZARDS	B: LARGELY NATURAL	B: LARGELY NATURAL
V20B	KWAZULU-NATAL		HIGH	B: SMALL RISK ALLOWED	B: LARGELY NATURAL	B: LARGELY NATURAL
V20C	KWAZULU-NATAL		HIGH	B: SMALL RISK ALLOWED	B: LARGELY NATURAL	B: LARGELY NATURAL
V20D	KWAZULU-NATAL	Mooi	HIGH	B: SMALL RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL
V20E	KWAZULU-NATAL	Mooi R	MODERATE	C: MODERATE RISK ALLOWED	B: LARGELY NATURAL	B: LARGELY NATURAL
V20F	KWAZULU-NATAL		MODERATE	C: MODERATE RISK ALLOWED	B: LARGELY NATURAL	B: LARGELY NATURAL
V20G	KWAZULU-NATAL		HIGH	B: SMALL RISK ALLOWED	B: LARGELY NATURAL	B: LARGELY NATURAL
V20H	KWAZULU-NATAL		HIGH	B: SMALL RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
V20J	KWAZULU-NATAL		HIGH	B: SMALL RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
V31A	KWAZULU-NATAL	SLANG	MODERATE	C: MODERATE RISK ALLOWED	B: LARGELY NATURAL	A: UNMODIFIED, NATURAL
V31B	KWAZULU-NATAL	SLANG/BUFFALO	MODERATE	C: MODERATE RISK ALLOWED	B: LARGELY NATURAL	B: LARGELY NATURAL

QUAT.No.	PROVINCE	RIVERS	EISC	DEMC	PESC	BEST AEMC
V31C	KWAZULU-NATAL	BUFFALO	MODERATE	C: MODERATE RISK ALLOWED	B: LARGELY NATURAL	B: LARGELY NATURAL
V31D	KWAZULU-NATAL	Buffalo Ngogo to Ngagane confl	MODERATE	C: MODERATE RISK ALLOWED	B: LARGELY NATURAL	B: LARGELY NATURAL
V31E	KWAZULU-NATAL	NGAGANE	MODERATE	C: MODERATE RISK ALLOWED	B: LARGELY NATURAL	A: UNMODIFIED, NATURAL
V31F	KWAZULU-NATAL	hORNE, source to Ngangane	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
V31G	KWAZULU-NATAL	Ngagane chelmsford to Horne confl. inc. Alcockspruit	LOW	D: LARGE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
V31H	KWAZULU-NATAL	NCANDU	MODERATE	C: MODERATE RISK ALLOWED	B: LARGELY NATURAL	A: UNMODIFIED, NATURAL
V31J	KWAZULU-NATAL	Ncandu	HIGH	B: SMALL RISK ALLOWED	B: LARGELY NATURAL	B: LARGELY NATURAL
V31K	KWAZULU-NATAL	Ngagane to Buffalo confl.	MODERATE	C: MODERATE RISK ALLOWED	D: LARGELY MODIFIED	D: LARGELY MODIFIED
V32A	KWAZULU-NATAL	Dorpspruit, source to Utrecht	MODERATE	C: MODERATE RISK ALLOWED	B: LARGELY NATURAL	B: LARGELY NATURAL
V32B	KWAZULU-NATAL	Buffalo Newcastle to Dorpspruit confl	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
V32C	KWAZULU-NATAL	Buffalo, Dorp confl to Kwaggadrif	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL
V32D	KWAZULU-NATAL	Buffalo, Kwaggadrif to Tayside	MODERATE	C: MODERATE RISK ALLOWED	B: LARGELY NATURAL	B: LARGELY NATURAL
V32E	KWAZULU-NATAL	Buffalo Taysdide to ? Mzinyatshana, sterkstroom & sand confl.	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL
V32F	KWAZULU-NATAL	Buffalo to Blood R confl	MODERATE	C: MODERATE RISK ALLOWED	B: LARGELY NATURAL	B: LARGELY NATURAL
V32G	KWAZULU-NATAL	Bloed source to Kingsley	HIGH	B: SMALL RISK ALLOWED	A: UNMODIFIED, NATURAL	A: UNMODIFIED, NATURAL
V32H	KWAZULU-NATAL	Blood R., Kingsley to Buffalo confl.	MODERATE	C: MODERATE RISK ALLOWED	B: LARGELY NATURAL	B: LARGELY NATURAL
V33A	KWAZULU-NATAL	Buffalo, Bloed confl. to Rorkes drift	MODERATE	C: MODERATE RISK ALLOWED	B: LARGELY NATURAL	A: UNMODIFIED, NATURAL
V33B	KWAZULU-NATAL	Buffalo R, Rorkes Drift to Buffelshoek	MODERATE	C: MODERATE RISK ALLOWED	B: LARGELY NATURAL	A: UNMODIFIED, NATURAL
V33C	KWAZULU-NATAL	Buffalo, Buffelshoek to Gubezi confl	MODERATE	C: MODERATE RISK ALLOWED	B: LARGELY NATURAL	A: UNMODIFIED, NATURAL
V33D	KWAZULU-NATAL	Buffalo, Gubezi to Thukela confl.	MODERATE	C: MODERATE RISK ALLOWED	B: LARGELY NATURAL	A: UNMODIFIED, NATURAL
V40A	KWAZULU-NATAL	Thukela, Buffalo confl. to Mfongosi	HIGH	B: SMALL RISK ALLOWED	A: UNMODIFIED, NATURAL	A: UNMODIFIED, NATURAL
V40B	KWAZULU-NATAL	Thukela Mfongosi to Jamesons Drift	HIGH	B: SMALL RISK ALLOWED	A: UNMODIFIED, NATURAL	A: UNMODIFIED, NATURAL
V40C	KWAZULU-NATAL	Nsuze - upper reach	MODERATE	C: MODERATE RISK ALLOWED	B: LARGELY NATURAL	A: UNMODIFIED, NATURAL
V40D	KWAZULU-NATAL	Lower Unsuze to Thukela Confl.	MODERATE	C: MODERATE RISK ALLOWED	A: UNMODIFIED, NATURAL	A: UNMODIFIED, NATURAL
V40E	KWAZULU-NATAL	Thukela, Jamesons Drift to Middeldrif	HIGH	B: SMALL RISK ALLOWED	B: LARGELY NATURAL	A: UNMODIFIED, NATURAL
V50A	KWAZULU-NATAL	Thukela, Middledrift to Madidima	HIGH	B: SMALL RISK ALLOWED	B: LARGELY NATURAL	B: LARGELY NATURAL

QUAT.No.	PROVINCE	RIVERS	EISC	DEMC	PESC	BEST AEMC
V50B	KWAZULU-NATAL	Thukela, Madidima to Emabhobhane	HIGH	B: SMALL RISK ALLOWED	B: LARGELY NATURAL	B: LARGELY NATURAL
V50C	KWAZULU-NATAL	Thukela Emabhobhane to Lower Thukela eir	HIGH	B: SMALL RISK ALLOWED	A: UNMODIFIED, NATURAL	A: UNMODIFIED, NATURAL
V50D	KWAZULU-NATAL	Thukela Mandini weir to estuary	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL
V60A	KWAZULU-NATAL	SUNDAYS RIVER	MODERATE	C: MODERATE RISK ALLOWED	B: LARGELY NATURAL	A: UNMODIFIED, NATURAL
V60B	KWAZULU-NATAL	Sundays, Nkunzi to Elandslaagte	MODERATE	C: MODERATE RISK ALLOWED	A: UNMODIFIED, NATURAL	A: UNMODIFIED, NATURAL
V60C	KWAZULU-NATAL	Sundays, Elandslaagte to Wasbank confl.	MODERATE	C: MODERATE RISK ALLOWED	A: UNMODIFIED, NATURAL	A: UNMODIFIED, NATURAL
V60D	KWAZULU-NATAL	Wasbank, source to Wasbank village	MODERATE	C: MODERATE RISK ALLOWED	B: LARGELY NATURAL	A: UNMODIFIED, NATURAL
V60E	KWAZULU-NATAL	Wasbank from Wasbank to Sundays confl	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL
V60F	KWAZULU-NATAL	Sundays Wasbank to Thukela confl	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	A: UNMODIFIED, NATURAL
V60G	KWAZULU-NATAL	Thukela, Bushmans confl to Mhlangana confl	HIGH	B: SMALL RISK ALLOWED	B: LARGELY NATURAL	B: LARGELY NATURAL
V60H	KWAZULU-NATAL	Thukela, Mahlangane confl to Sampofu confl	HIGH	B: SMALL RISK ALLOWED	B: LARGELY NATURAL	B: LARGELY NATURAL
V60J	KWAZULU-NATAL	Thukela, Sampofu confl. to Nadi confl	HIGH	B: SMALL RISK ALLOWED	B: LARGELY NATURAL	B: LARGELY NATURAL
V60K	KWAZULU-NATAL	Thukela, Nadi confl to Buffalo confl	HIGH	B: SMALL RISK ALLOWED	B: LARGELY NATURAL	B: LARGELY NATURAL
V70A	KWAZULU-NATAL	BUSHMANS	HIGH	B: SMALL RISK ALLOWED	A: UNMODIFIED, NATURAL	A: UNMODIFIED, NATURAL
V70B	KWAZULU-NATAL	ncibidwane	MODERATE	C: MODERATE RISK ALLOWED	B: LARGELY NATURAL	A: UNMODIFIED, NATURAL
V70C	KWAZULU-NATAL	Bushmans, Mahlutshini to Wagondrift	HIGH	B: SMALL RISK ALLOWED	B: LARGELY NATURAL	A: UNMODIFIED, NATURAL
V70D	KWAZULU-NATAL	Little Bushmans to Bushmans confl.	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	A: UNMODIFIED, NATURAL
V70E	KWAZULU-NATAL	Bushmans, Wagon Drift to L. Bushmans confl	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
V70F	KWAZULU-NATAL	Bushmans, L bushmansconfl to Weenen	MODERATE	C: MODERATE RISK ALLOWED	D: LARGELY MODIFIED	B: LARGELY NATURAL
V70G	KWAZULU-NATAL	Bushmans, Weenen to Thukela	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL

Fig.49: EISC, PESC & AEMC for V11A - V20J

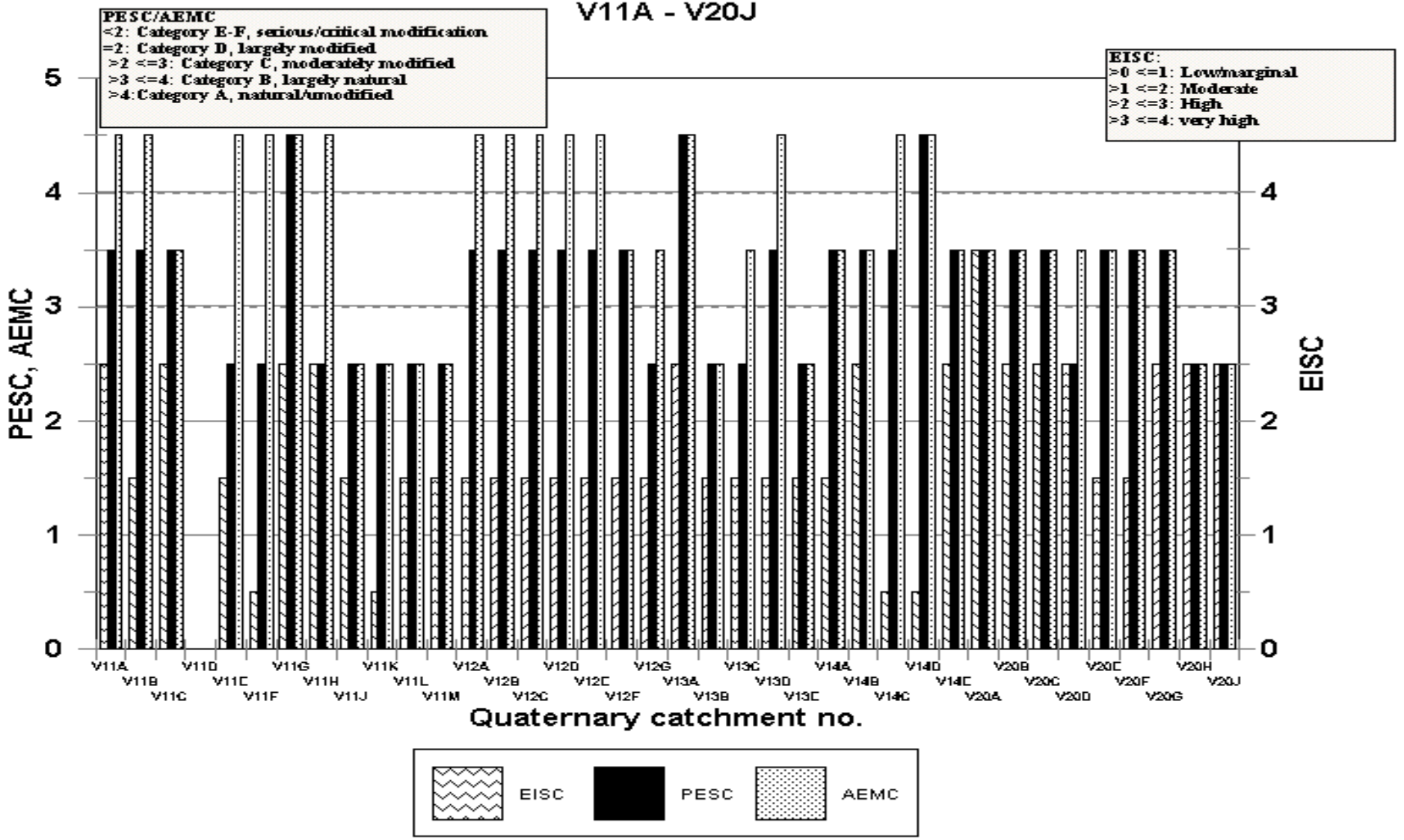


Fig.50: EISC, PESC & AEMC for V31A - V50D

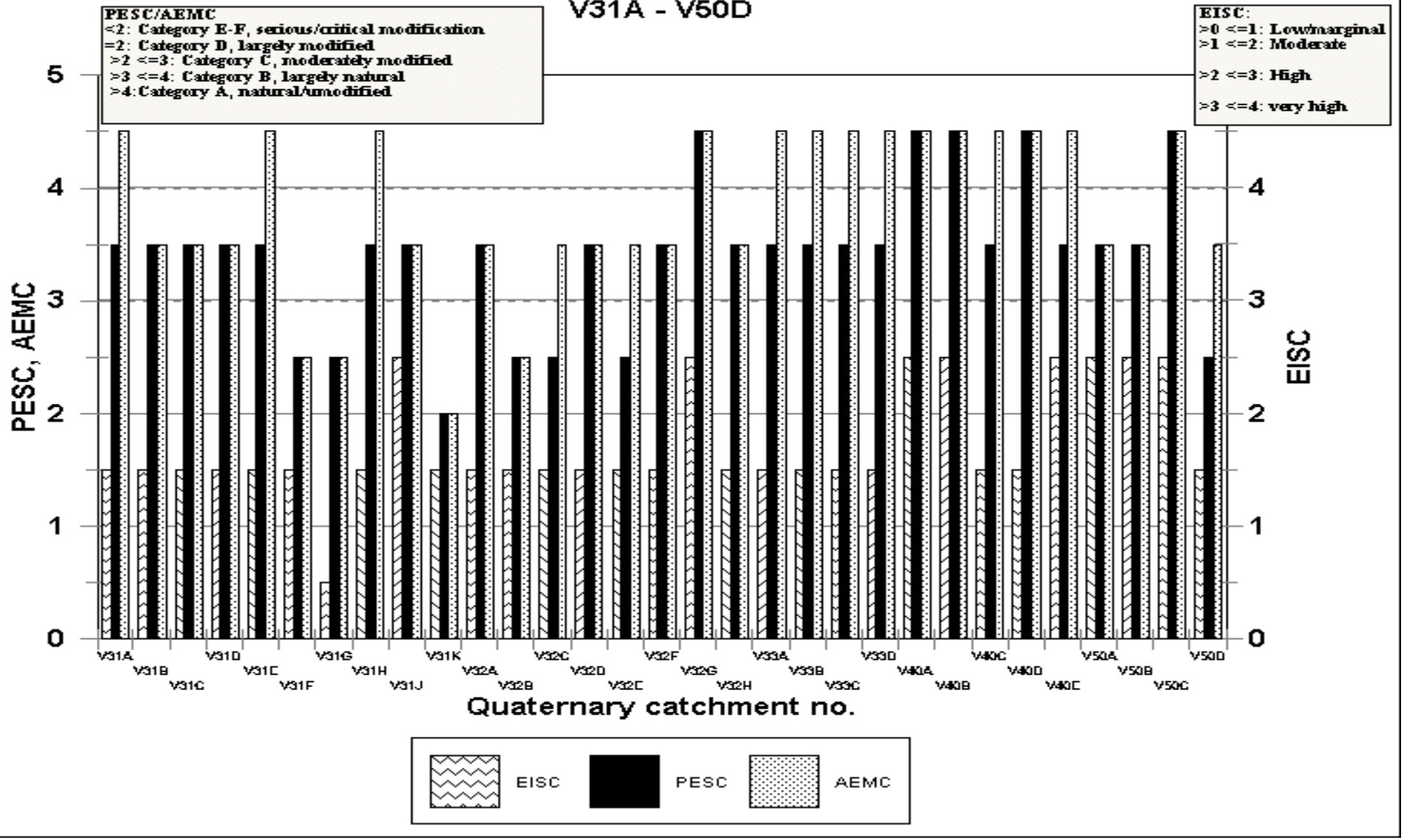


Fig.51: EISC, PESC & AEMC for V60A - V70G

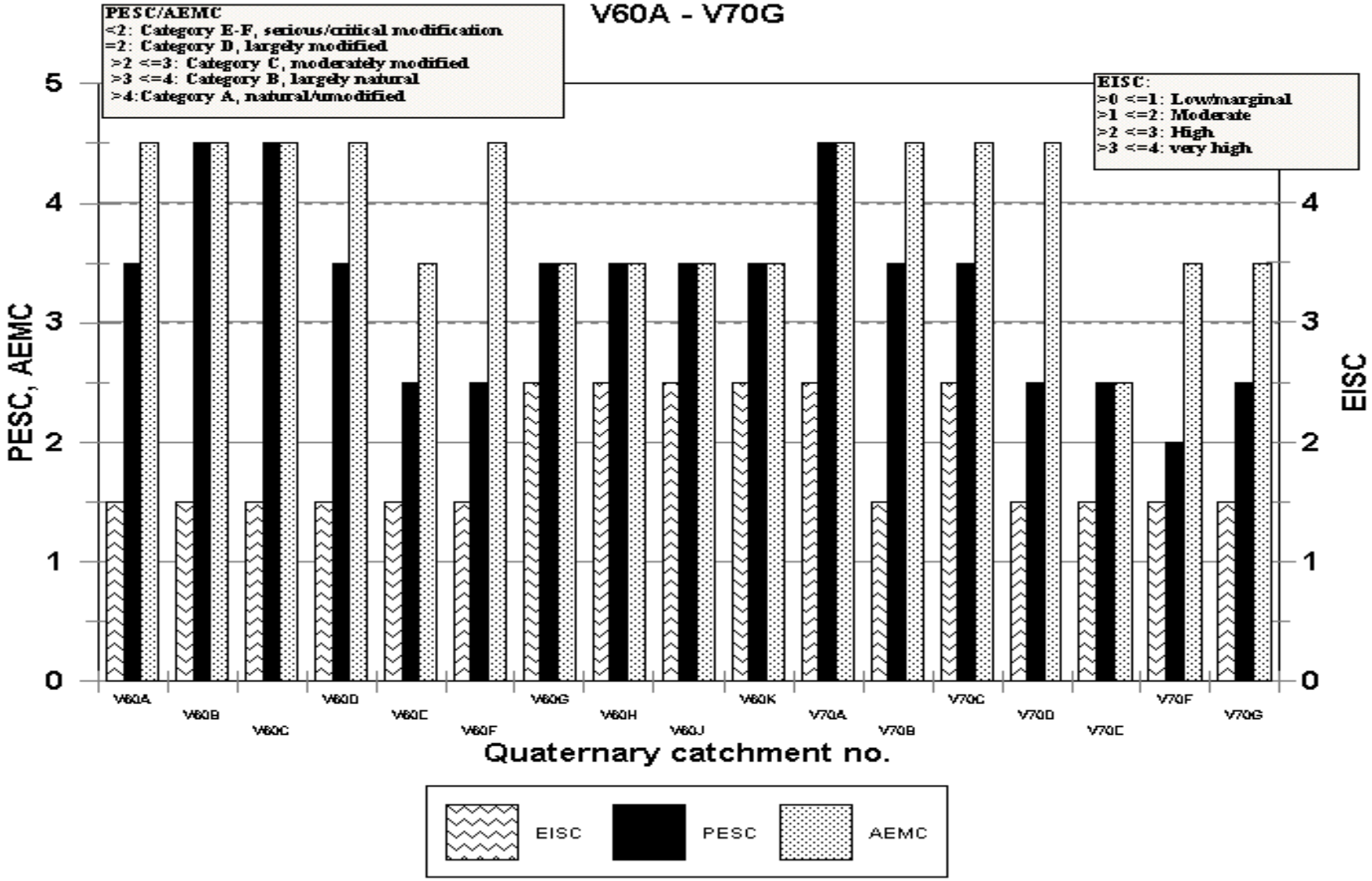


Table 21: Ratings for quaternary catchments of primary drainage W (Fig. 54 – 57).

QUAT.No.	PROVINCE	RIVERS	EISC	DEMC	PESC	BEST AEMC
W11A	KWAZULU-NATAL	atigulu, source to St Cyprians	MODERATE	C: MODERATE RISK ALLOWED	A: UNMODIFIED, NATURAL	A: UNMODIFIED, NATURAL
W11B	KWAZULU-NATAL	Matikulu, St Cyprians to Amatikulu	HIGH	B: SMALL RISK ALLOWED	A: UNMODIFIED, NATURAL	A: UNMODIFIED, NATURAL
W11C	KWAZULU-NATAL	Matikulu, Amatikulu to sea	HIGH	B: SMALL RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL
W12A	KWAZULU-NATAL	Mhlatuze, source to Duikerhoek	MODERATE	C: MODERATE RISK ALLOWED	B: LARGELY NATURAL	A: UNMODIFIED, NATURAL
W12B	KWAZULU-NATAL	Mhlatuse, Duikerhoek to Goedetrouw Dam	HIGH	B: SMALL RISK ALLOWED	B: LARGELY NATURAL	B: LARGELY NATURAL
W12C	KWAZULU-NATAL	Mfule R to west of Fatimas	MODERATE	C: MODERATE RISK ALLOWED	A: UNMODIFIED, NATURAL	A: UNMODIFIED, NATURAL
W12D	KWAZULU-NATAL	Mhlatuze Goedetrouw to w of Bashibisi	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
W12E	KWAZULU-NATAL	Mhlutuze, Bashibisi to Mhlatuzane confl.	HIGH	B: SMALL RISK ALLOWED	B: LARGELY NATURAL	B: LARGELY NATURAL
W12F	KWAZULU-NATAL	Mhlatuze, Mhlatuzana confl to estuary	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	E - F: > E NOT ATTAINABLE IN 5 YR - USE D AS DEFAULT
W12G	KWAZULU-NATAL	Nseleni, source to makhaba	MODERATE	C: MODERATE RISK ALLOWED	A: UNMODIFIED, NATURAL	A: UNMODIFIED, NATURAL
W12H	KWAZULU-NATAL	Nseleni, Makhaba to Enseleni NR	HIGH	B: SMALL RISK ALLOWED	A: UNMODIFIED, NATURAL	A: UNMODIFIED, NATURAL
W12J	KWAZULU-NATAL	Msingazi + Nhlabane Lake catchments	MODERATE	C: MODERATE RISK ALLOWED	B: LARGELY NATURAL	B: LARGELY NATURAL
W13A	KWAZULU-NATAL	Mlalazi, source to Tando	HIGH	B: SMALL RISK ALLOWED	B: LARGELY NATURAL	B: LARGELY NATURAL
W13B	KWAZULU-NATAL	Mlalazi Tando to eastuary	MODERATE	C: MODERATE RISK ALLOWED	A: UNMODIFIED, NATURAL	A: UNMODIFIED, NATURAL
W21A	KWAZULU-NATAL	White Umfolozi, source to Klipfontein Dam	MODERATE	C: MODERATE RISK ALLOWED	B: LARGELY NATURAL	A: UNMODIFIED, NATURAL
W21B	KWAZULU-NATAL	White Umfolozi, Klipfontein Dam to Sandspruit confl.	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
W21C	KWAZULU-NATAL	Sandspruit source to W. Umfolozi confl	MODERATE	C: MODERATE RISK ALLOWED	B: LARGELY NATURAL	A: UNMODIFIED, NATURAL
W21D	KWAZULU-NATAL	Mvunyane source to near Fort Newdigate	MODERATE	C: MODERATE RISK ALLOWED	B: LARGELY NATURAL	A: UNMODIFIED, NATURAL
W21E	KWAZULU-NATAL	Unnamed trib. source to Mvunyane confl.	MODERATE	C: MODERATE RISK ALLOWED	B: LARGELY NATURAL	A: UNMODIFIED, NATURAL
W21F	KWAZULU-NATAL	W Umfolozi Sandspruit confl to Mvunyane confl	MODERATE	C: MODERATE RISK ALLOWED	B: LARGELY NATURAL	B: LARGELY NATURAL
W21G	KWAZULU-NATAL	W Umfolozi Mvunyane confl to Rooirant	MODERATE	C: MODERATE RISK ALLOWED	B: LARGELY NATURAL	B: LARGELY NATURAL
W21H	KWAZULU-NATAL	W Umfolozi Rooirant to Ntuzuma	MODERATE	C: MODERATE RISK ALLOWED	B: LARGELY NATURAL	A: UNMODIFIED, NATURAL
W21J	KWAZULU-NATAL	W Umfolozi, Ntuzuma to Vulcan	MODERATE	C: MODERATE RISK ALLOWED	B: LARGELY NATURAL	A: UNMODIFIED, NATURAL

QUAT.No.	PROVINCE	RIVERS	EISC	DEMC	PESC	BEST AEMC
W21K	KWAZULU-NATAL	W Umfolozi Vulcan to Umfolozi GR border	MODERATE	C: MODERATE RISK ALLOWED	B: LARGELY NATURAL	A: UNMODIFIED, NATURAL
W21L	KWAZULU-NATAL	W Umfolozi, boundary Umfolozi GR to B Umfolozi confl.	HIGH	B: SMALL RISK ALLOWED	A: UNMODIFIED, NATURAL	A: UNMODIFIED, NATURAL
W22A	KWAZULU-NATAL	B Umfolozi source to Swartfolozi	HIGH	B: SMALL RISK ALLOWED	B: LARGELY NATURAL	B: LARGELY NATURAL
W22B	KWAZULU-NATAL	Mbizankulu trib of B Umfolozi	MODERATE	C: MODERATE RISK ALLOWED	B: LARGELY NATURAL	B: LARGELY NATURAL
W22C	KWAZULU-NATAL	B. Umfolozi, Swartfolozi to thaka confl.	HIGH	B: SMALL RISK ALLOWED	A: UNMODIFIED, NATURAL	A: UNMODIFIED, NATURAL
W22D	KWAZULU-NATAL	Thaka, ource to B Unfolozi confl	MODERATE	C: MODERATE RISK ALLOWED	A: UNMODIFIED, NATURAL	A: UNMODIFIED, NATURAL
W22E	KWAZULU-NATAL	SCWABEZI, SOURE TO bULUWANE CONFL	HIGH	B: SMALL RISK ALLOWED	A: UNMODIFIED, NATURAL	A: UNMODIFIED, NATURAL
W22F	KWAZULU-NATAL	B. Umfolozi Thaka confl to Vuna	MODERATE	C: MODERATE RISK ALLOWED	A: UNMODIFIED, NATURAL	A: UNMODIFIED, NATURAL
W22G	KWAZULU-NATAL	Vuna,source to B Umfolozi confl	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	E - F: > E NOT ATTAINABLE IN 5 YR - USE D AS DEFAULT
W22H	KWAZULU-NATAL	B Umfolozi, Vuna to Dazeni conf	MODERATE	C: MODERATE RISK ALLOWED	A: UNMODIFIED, NATURAL	A: UNMODIFIED, NATURAL
W22J	KWAZULU-NATAL	B Umfolozi, Dazeni confl to Mona confl	MODERATE	C: MODERATE RISK ALLOWED	A: UNMODIFIED, NATURAL	A: UNMODIFIED, NATURAL
W22K	KWAZULU-NATAL	Mona source to B. Umfolozi confl	MODERATE	C: MODERATE RISK ALLOWED	B: LARGELY NATURAL	A: UNMODIFIED, NATURAL
W22L	KWAZULU-NATAL	B Umfolozi Mona confl to W Umfolozi confl.	HIGH	B: SMALL RISK ALLOWED	A: UNMODIFIED, NATURAL	A: UNMODIFIED, NATURAL
W23A	KWAZULU-NATAL	Umfolozi, B-W confl to national road	VERY HIGH	A: NO HUMAN HAZARDS	A: UNMODIFIED, NATURAL	A: UNMODIFIED, NATURAL
W23B	KWAZULU-NATAL	Umsinduzi, source to Teza lake	MODERATE	C: MODERATE RISK ALLOWED	A: UNMODIFIED, NATURAL	A: UNMODIFIED, NATURAL
W23C	KWAZULU-NATAL	Msinduze, Teza lake to estuary	MODERATE	C: MODERATE RISK ALLOWED	B: LARGELY NATURAL	A: UNMODIFIED, NATURAL
W23D	KWAZULU-NATAL	Umfolozi, national road to estuary	HIGH	B: SMALL RISK ALLOWED	A: UNMODIFIED, NATURAL	A: UNMODIFIED, NATURAL
W31A	KWAZULU-NATAL	Mkuze, source to Ontevrede	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
W31B	KWAZULU-NATAL	Mkuze Ontevrede to Siklengeni confl at Verdrukt	HIGH	B: SMALL RISK ALLOWED	B: LARGELY NATURAL	B: LARGELY NATURAL
W31C	KWAZULU-NATAL	Siklengeni source to Mkuze confl.	MODERATE	C: MODERATE RISK ALLOWED	A: UNMODIFIED, NATURAL	A: UNMODIFIED, NATURAL
W31D	KWAZULU-NATAL	Mkuze, Verdrukt to Mooiplaats	MODERATE	C: MODERATE RISK ALLOWED	A: UNMODIFIED, NATURAL	A: UNMODIFIED, NATURAL
W31E	KWAZULU-NATAL	Mkuze, Mooiplaats to Oerwoud	MODERATE	C: MODERATE RISK ALLOWED	B: LARGELY NATURAL	A: UNMODIFIED, NATURAL

QUAT.No.	PROVINCE	RIVERS	EISC	DEMC	PESC	BEST AEMC
W31F	KWAZULU-NATAL	Mkuze, Oerwoud to Nkunzana confl	MODERATE	C: MODERATE RISK ALLOWED	A: UNMODIFIED, NATURAL	A: UNMODIFIED, NATURAL
W31G	KWAZULU-NATAL	Mkuze, Nkunzana confl to Clekness	MODERATE	C: MODERATE RISK ALLOWED	A: UNMODIFIED, NATURAL	A: UNMODIFIED, NATURAL
W31H	KWAZULU-NATAL	Mkuze, Clerkness to Mkuze GR	HIGH	B: SMALL RISK ALLOWED	B: LARGELY NATURAL	E - F: > E NOT ATTAINABLE IN 5 YR - USE D AS DEFAULT
W31J	KWAZULU-NATAL	Mkuze, boundary of GR to Msunduzi confl	VERY HIGH	A: NO HUMAN HAZARDS	B: LARGELY NATURAL	B: LARGELY NATURAL
W31K	KWAZULU-NATAL	Umsunduzi, source to Bayala	LOW	D: LARGE RISK ALLOWED	A: UNMODIFIED, NATURAL	A: UNMODIFIED, NATURAL
W31L	KWAZULU-NATAL	Msunduzi, Bayala to Mkuze confl	VERY HIGH	A: NO HUMAN HAZARDS	A: UNMODIFIED, NATURAL	A: UNMODIFIED, NATURAL
W32A	KWAZULU-NATAL	Mkuze R including Muzi swamp	VERY HIGH	A: NO HUMAN HAZARDS	B: LARGELY NATURAL	B: LARGELY NATURAL
W32B	KWAZULU-NATAL	Mkuze - GR to St Lucia	HIGH	B: SMALL RISK ALLOWED	A: UNMODIFIED, NATURAL	A: UNMODIFIED, NATURAL
W32C	KWAZULU-NATAL	Msinene, source to False bay	MODERATE	C: MODERATE RISK ALLOWED	A: UNMODIFIED, NATURAL	A: UNMODIFIED, NATURAL
W32D	KWAZULU-NATAL	Wela?Nzimane R to west of Hluhluwe GR	MODERATE	C: MODERATE RISK ALLOWED	B: LARGELY NATURAL	A: UNMODIFIED, NATURAL
W32E	KWAZULU-NATAL	Wela/Nzimane to Hluhluwe confl	VERY HIGH	A: NO HUMAN HAZARDS	A: UNMODIFIED, NATURAL	A: UNMODIFIED, NATURAL
W32F	KWAZULU-NATAL	Hluhluwe R Dam to False Bay	HIGH	B: SMALL RISK ALLOWED	B: LARGELY NATURAL	B: LARGELY NATURAL
W32G	KWAZULU-NATAL	Nyalazi R source to Mfekayi	MODERATE	C: MODERATE RISK ALLOWED	B: LARGELY NATURAL	B: LARGELY NATURAL
W32H	KWAZULU-NATAL	Nyalazi, Mfekayi to False bay	VERY HIGH	A: NO HUMAN HAZARDS	A: UNMODIFIED, NATURAL	A: UNMODIFIED, NATURAL
W41A	KWAZULU-NATAL	Bivane, source to Protect/Diepkloof road	HIGH	B: SMALL RISK ALLOWED	B: LARGELY NATURAL	A: UNMODIFIED, NATURAL
W41B	KWAZULU-NATAL	Bivane, Protect/Diepkloof road to Mpumvane confl.	HIGH	B: SMALL RISK ALLOWED	A: UNMODIFIED, NATURAL	A: UNMODIFIED, NATURAL
W41C	KWAZULU-NATAL	Mpemvane R source to Bivane confl.	MODERATE	C: MODERATE RISK ALLOWED	A: UNMODIFIED, NATURAL	A: UNMODIFIED, NATURAL
W41D	KWAZULU-NATAL	Bivane, Mpemvane confl to Natal Spa	MODERATE	C: MODERATE RISK ALLOWED	B: LARGELY NATURAL	B: LARGELY NATURAL
W41E	KWAZULU-NATAL	Bivane, Natal Spa to Manzana confl	HIGH	B: SMALL RISK ALLOWED	A: UNMODIFIED, NATURAL	A: UNMODIFIED, NATURAL
W41F	KWAZULU-NATAL	Mangana, source to Bivane confl	HIGH	B: SMALL RISK ALLOWED	B: LARGELY NATURAL	A: UNMODIFIED, NATURAL
W41G	KWAZULU-NATAL	Bivane R Mangana confl. to Phongola confl	HIGH	B: SMALL RISK ALLOWED	A: UNMODIFIED, NATURAL	A: UNMODIFIED, NATURAL
W42A	KWAZULU-NATAL	PONGOLO	HIGH	B: SMALL RISK ALLOWED	A: UNMODIFIED, NATURAL	A: UNMODIFIED, NATURAL
W42B	KWAZULU-NATAL	PONGOLO	HIGH	B: SMALL RISK ALLOWED	B: LARGELY NATURAL	B: LARGELY NATURAL
W42C	MPUMALANGA	NTOMBE	HIGH	B: SMALL RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL
W42D	KWAZULU-NATAL	PONGOLO	HIGH	B: SMALL RISK ALLOWED	B: LARGELY NATURAL	B: LARGELY NATURAL
W42E	KWAZULU-NATAL	PONGOLO	HIGH	B: SMALL RISK ALLOWED	B: LARGELY NATURAL	B: LARGELY NATURAL
W42F	KWAZULU-NATAL		HIGH	B: SMALL RISK ALLOWED	D: LARGELY MODIFIED	C: MODERATELY MODIFIED

QUAT.No.	PROVINCE	RIVERS	EISC	DEMC	PESC	BEST AEMC
W42G	KWAZULU-NATAL	PONGOLO	HIGH	B: SMALL RISK ALLOWED	A: UNMODIFIED, NATURAL	A: UNMODIFIED, NATURAL
W42H	KWAZULU-NATAL	PONGOLO	HIGH	B: SMALL RISK ALLOWED	A: UNMODIFIED, NATURAL	A: UNMODIFIED, NATURAL
W42J	KWAZULU-NATAL	PONGOLO	HIGH	B: SMALL RISK ALLOWED	B: LARGELY NATURAL	A: UNMODIFIED, NATURAL
W42K	KWAZULU-NATAL	MOZANA	HIGH	B: SMALL RISK ALLOWED	D: LARGELY MODIFIED	C: MODERATELY MODIFIED
W42L	KWAZULU-NATAL	MOZANA	HIGH	B: SMALL RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL
W42M	KWAZULU-NATAL	PONGOLO	HIGH	B: SMALL RISK ALLOWED	A: UNMODIFIED, NATURAL	A: UNMODIFIED, NATURAL
W43A	**SWAZILAND**					
W43B	**SWAZILAND**					
W43C	**SWAZILAND**					
W43D	**SWAZILAND**					
W43E	**SWAZILAND**					
W43F	KWAZULU-NATAL	Ingwavuma	HIGH	B: SMALL RISK ALLOWED	A: UNMODIFIED, NATURAL	A: UNMODIFIED, NATURAL
W44A	KWAZULU-NATAL	PONGOLO	HIGH	B: SMALL RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL
W44B	KWAZULU-NATAL	PONGOLO	HIGH	B: SMALL RISK ALLOWED	D: LARGELY MODIFIED	C: MODERATELY MODIFIED
W44C	KWAZULU-NATAL	PONGOLO	HIGH	B: SMALL RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
W44D	KWAZULU-NATAL	PONGOLO	HIGH	B: SMALL RISK ALLOWED	D: LARGELY MODIFIED	C: MODERATELY MODIFIED
W44E	**SWAZILAND**					
W45A	KWAZULU-NATAL	PONGOLO	VERY HIGH	A: NO HUMAN HAZARDS	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
W45B	KWAZULU-NATAL	PONGOLO	VERY HIGH	A: NO HUMAN HAZARDS	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
W51A	MPUMALANGA	Assegaai R: source to Mabola confl.	VERY HIGH	A: NO HUMAN HAZARDS	C: MODERATELY MODIFIED	B: LARGELY NATURAL
W51B	MPUMALANGA	Assegaai R: Mabola confl. to Heyshope Dam	HIGH	B: SMALL RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL
W51C	MPUMALANGA	Assegaai R: Heyshope Dam to confl nameless trib nr Piet Ritief	HIGH	B: SMALL RISK ALLOWED	D: LARGELY MODIFIED	E - F: > E NOT ATTAINABLE IN 5 YR - USE D AS DEFAULT
W51D	MPUMALANGA	Assegaai R: Piet Rietief to road SA side of Swazi border	HIGH	B: SMALL RISK ALLOWED	D: LARGELY MODIFIED	C: MODERATELY MODIFIED
W51E	**SWAZILAND**	**Mhkondvo (Assegaai R) to Ndlozani R confl. (Swazi)**	HIGH			
W51F	MPUMALANGA	Ndhlozane R upper reaches	HIGH	B: SMALL RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL
W51G	**SWAZILAND**					
W51H	**SWAZILAND**					
W52A	MPUMALANGA	Ohlelo R: Source to Loshlelo	HIGH	B: SMALL RISK ALLOWED	B: LARGELY NATURAL	B: LARGELY NATURAL
W52B	MPUMALANGA	Ohlelo R: Loshelo to Watervaldrift	HIGH	B: SMALL RISK ALLOWED	B: LARGELY NATURAL	B: LARGELY NATURAL
W52C	MPUMALANGA	Ohlelo R: Watervaldrift to R33	HIGH	B: SMALL RISK ALLOWED	B: LARGELY NATURAL	B: LARGELY NATURAL
W52D	MPUMALANGA	hlelo R: R33 to Ngwempisi confl.	HIGH	B: SMALL RISK ALLOWED	B: LARGELY NATURAL	B: LARGELY NATURAL
W53A	MPUMALANGA	Ngempisi source to Morgenstan Dam	HIGH	B: SMALL RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL
W53B	MPUMALANGA	Catchment of Jericho	LOW	D: LARGE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED

QUAT.No.	PROVINCE	RIVERS	EISC	DEMC	PESC	BEST AEMC
		Dam				
W53C	MPUMALANGA	Thole & Magodo R to confl. with Ngempisi R.	HIGH	B: SMALL RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL
W53D	MPUMALANGA	Ngempisi R: Morgenstand Dam to R33 & Mpama to Jericho Dam	HIGH	B: SMALL RISK ALLOWED	D: LARGELY MODIFIED	E - F: > E NOT ATTAINABLE IN 5 YR - USE D AS DEFAULT
W53E	**SWAZILAND**					
W53F	**SWAZILAND**					
W53G	**SWAZILAND**					
W54A	MPUMALANGA	Usutu R: source to about Riversdale (mostly endoreic)	LOW	D: LARGE RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL
W54B	MPUMALANGA	Usutu R: Riverdale to Westoe Dam	LOW	D: LARGE RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL
W54C	MPUMALANGA	Bonnie Brook: Source to R33	MODERATE	C: MODERATE RISK ALLOWED	B: LARGELY NATURAL	B: LARGELY NATURAL
W54D	MPUMALANGA	Usutu R: Westoe Dam to just short of Swazi border	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
W54E	**SWAZILAND**					
W54F	**SWAZILAND**					
W54G	**SWAZILAND**					
W55A	MPUMALANGA	Mpuluzi R: source to Hamilton - largely endoreic pans	HIGH	B: SMALL RISK ALLOWED	B: LARGELY NATURAL	B: LARGELY NATURAL
W55B	MPUMALANGA	Mpuluzi R: Hamilton to R33 at Busby	HIGH	B: SMALL RISK ALLOWED	B: LARGELY NATURAL	B: LARGELY NATURAL
W55C	MPUMALANGA	Mpuluzi R: R33 at Busby to RSA border	HIGH	B: SMALL RISK ALLOWED	B: LARGELY NATURAL	B: LARGELY NATURAL
W55D	MPUMALANGA	Metula R: source to Mpuluzi confl.	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
W55E	**SWAZILAND**					
W56A	MPUMALANGA	Klein Usutu, Upper reaches	HIGH	B: SMALL RISK ALLOWED	B: LARGELY NATURAL	B: LARGELY NATURAL
W56B	**SWAZILAND**					
W56C	**SWAZILAND**					
W56D	**SWAZILAND**					
W56E	**SWAZILAND**					
W56F	**SWAZILAND**					
W57A	**SWAZILAND**					
W57B	**SWAZILAND**					
W57C	**SWAZILAND**					
W57D	**SWAZILAND**					
W57E	**SWAZILAND**					
W57F	**SWAZILAND**					
W57G	**SWAZILAND**					

QUAT.No.	PROVINCE	RIVERS	EISC	DEMC	PESC	BEST AEMC
W57H	**SWAZILAND**					
W57J	**SWAZILAND**					
W57K	KWAZULU-NATAL	USUTU	VERY HIGH	A: NO HUMAN HAZARDS	B: LARGELY NATURAL	B: LARGELY NATURAL
W60A	**SWAZILAND**					
W60B	**SWAZILAND**					
W60C	**SWAZILAND**					
W60D	**SWAZILAND**					
W60E	**SWAZILAND**					
W60F	**SWAZILAND**					
W60G	**SWAZILAND**					
W60H	**SWAZILAND**					
W60J	**SWAZILAND**					
W60K	**SWAZILAND**					
W70A	KWAZULU-NATAL	NO RIVERS - Endorheic catchment (BUT RATED NEVERTHELESS)	HIGH	B: SMALL RISK ALLOWED	A: UNMODIFIED, NATURAL	A: UNMODIFIED, NATURAL

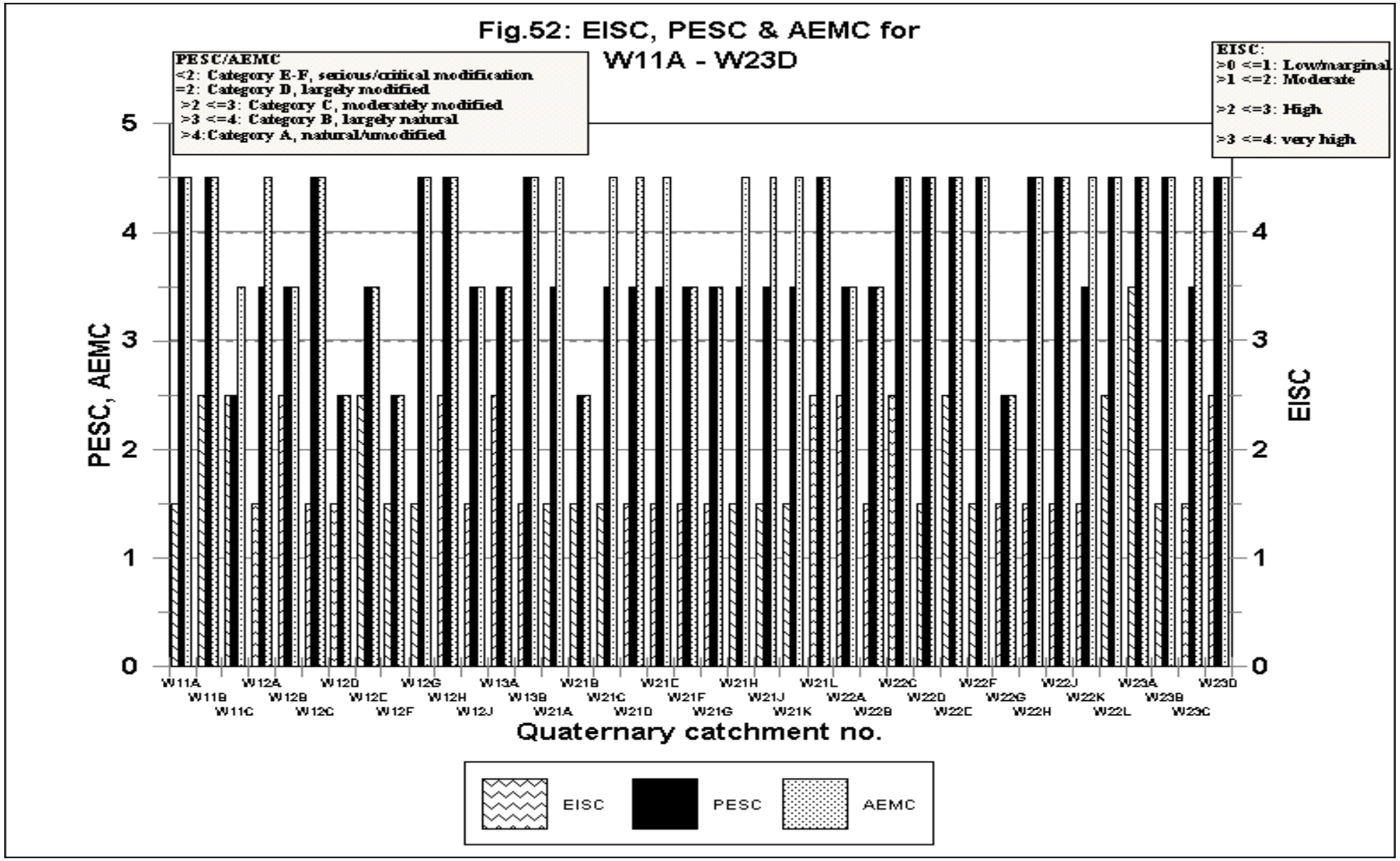


Fig.52: EISC, PESC & AEMC for
W11A - W23D
PESC/AEMC
<2: Category E-F, serious/critical modification
=2: Category D, largely modified
>2 <=3: Category C, moderately modified
>3 <=4: Category B, largely natural
>4:Category A, natural/unmodified
EISC:
>0 <=1: Low/marginal
>1 <=2: Moderate
>2 <=3: High
>3 <=4: very high
PESC, AEMC
EISC
0
1
2
3
4
5
W11A W11B W11C W12A W12B W12C W12D W12C W12F W12G W12H W12J W13A W13B W21A W21B W21C W21D W21C W21F W21G W21H W21J W21K W21L W22A W22B W22C W22D W22E W22F W22G W22H W22J W22K W22L W23A W23B W23C W23D
Quaternary catchment no.
EISC
PESC
AEMC

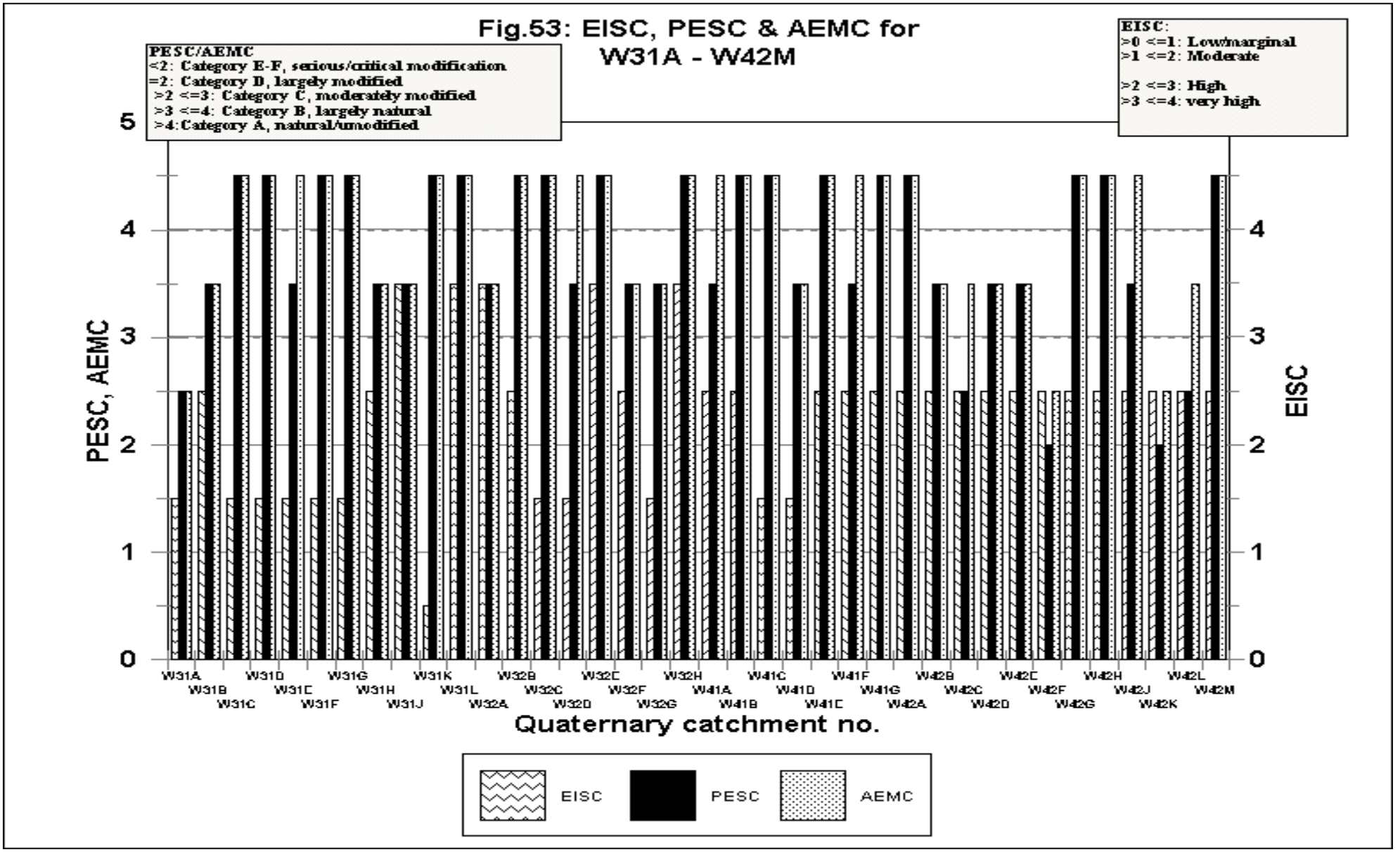


Fig.53: EISC, PESC & AEMC for W31A - W42M
PESC/AEMC
<2: Category E-F, serious/critical modification
=2: Category D, largely modified
>2 <=3: Category C, moderately modified
>3 <=4: Category B, largely natural
>4:Category A, natural/unmodified
EISC:
>0 <=1: Low/marginal
>1 <=2: Moderate
>2 <=3: High
>3 <=4: very high
PESC, AEMC
EISC
0
1
2
3
4
5
W31A W31B W31C W31D W31C W31F W31G W31H W31J W31K W31L W32A W32B W32C W32D W32C W32F W32G W32H W41A W41B W41C W41D W41C W41F W41G W42A W42B W42C W42D W42C W42F W42G W42H W42J W42K W42L W42M
Quaternary catchment no.
EISC
PESC
AEMC

Fig.54: EISC, PESC & AEMC for W43A - W54G

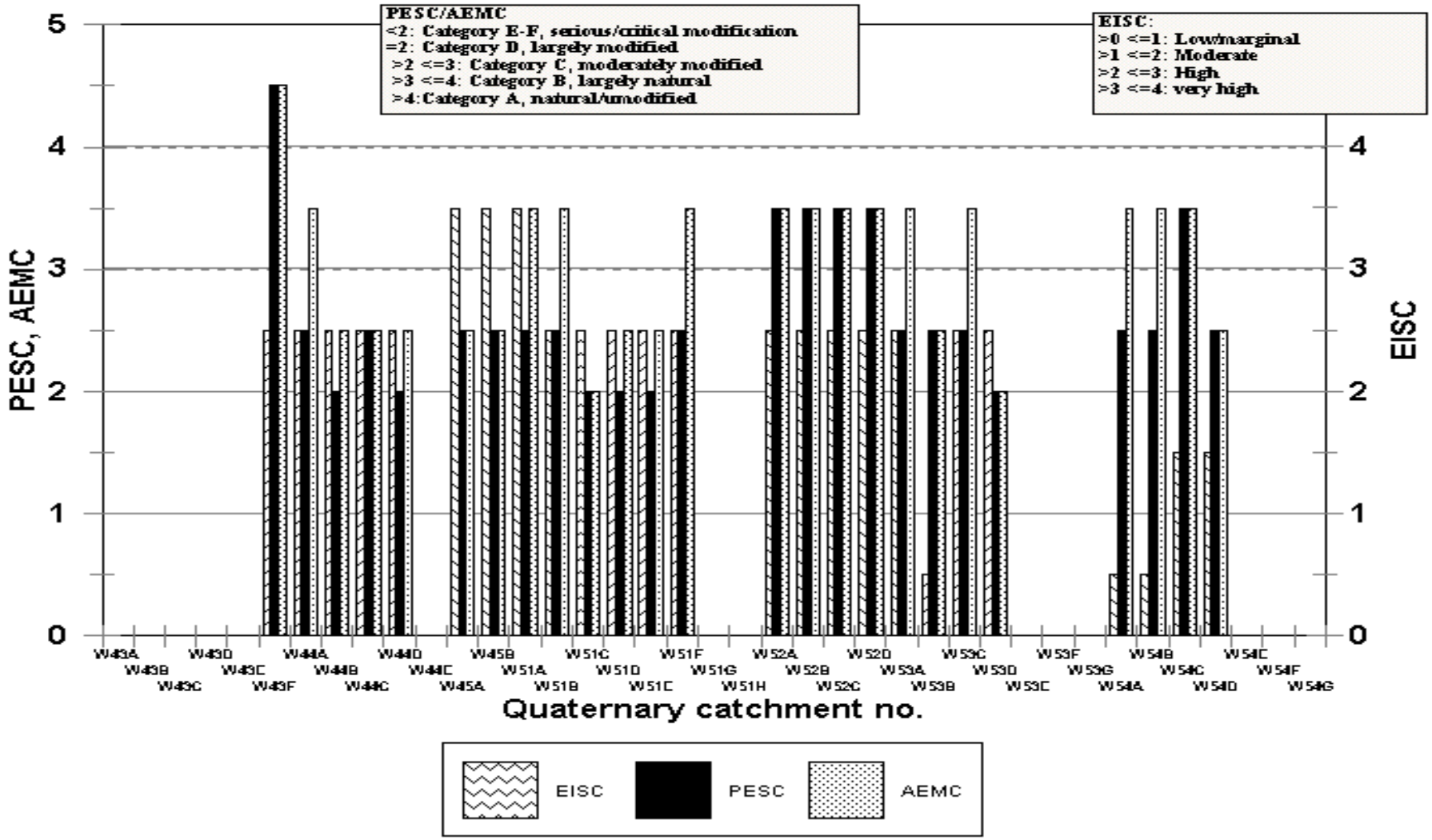


Fig.55: EISC, PESC & AEMC for W55A - W70A

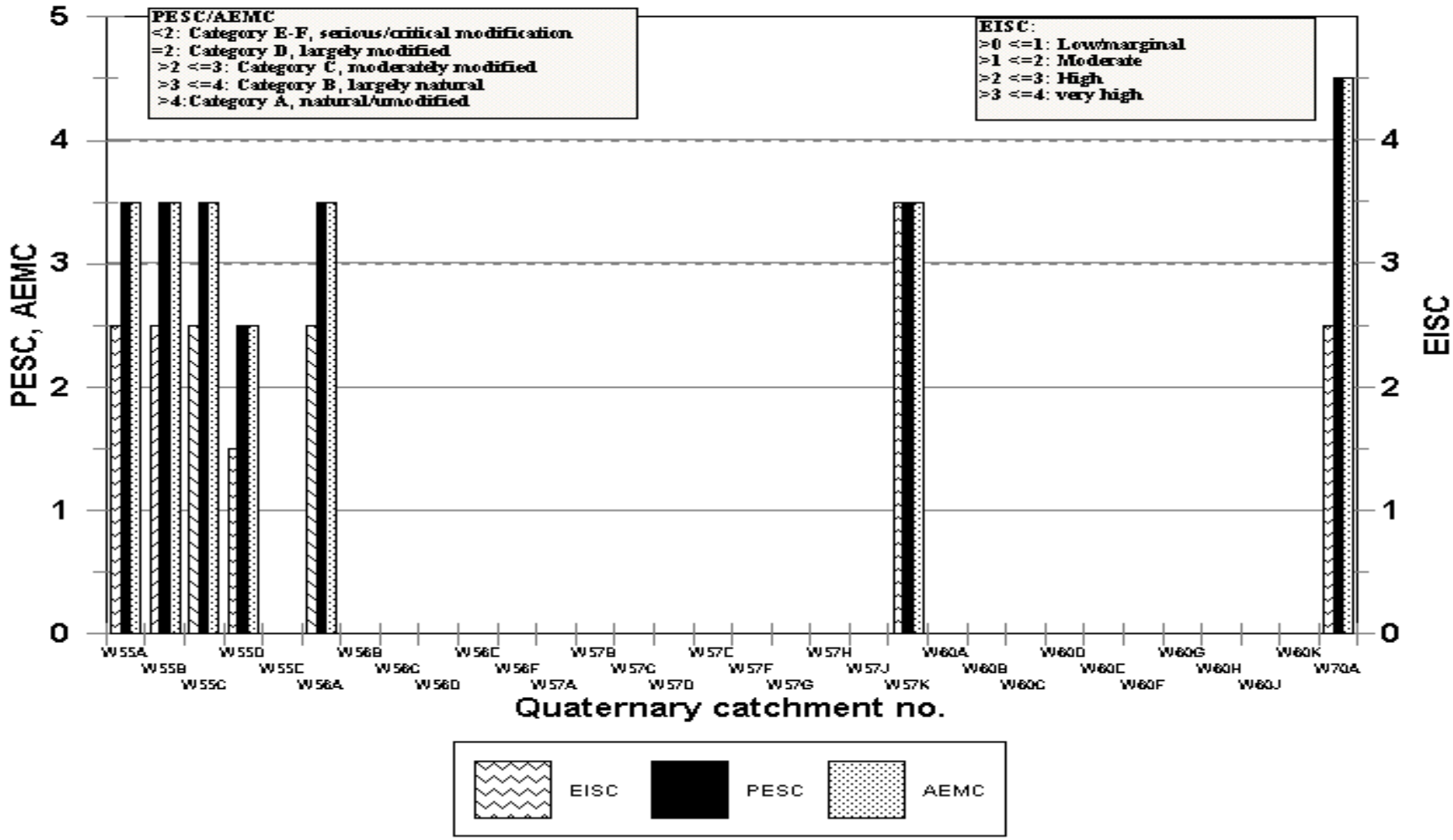


Table 22: Ratings for quaternary catchments of primary drainage X (Fig. 58 – 60).

QUAT.No.	PROVINCE	RIVERS	EISC	DEMC	PESC	BEST AEMC
X11A	MPUMALANGA	VAALRIVIERSPRUIT	LOW	D: LARGE RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL
X11B	MPUMALANGA	BOESMANSPRUIT	LOW	D: LARGE RISK ALLOWED	B: LARGELY NATURAL	B: LARGELY NATURAL
X11C	MPUMALANGA	CROCODILE	HIGH	B: SMALL RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
X11D	MPUMALANGA	KOMATI	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
X11E	MPUMALANGA	KOMATI	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
X11F	MPUMALANGA	KOMATI	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
X11G	MPUMALANGA	KOMATI	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
X11H	MPUMALANGA	KOMATI	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
X11J	MPUMALANGA	GLADDESPRUIT	MODERATE	C: MODERATE RISK ALLOWED	D: LARGELY MODIFIED	C: MODERATELY MODIFIED
X11K	MPUMALANGA	KOMATI	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
X12A	MPUMALANGA	BUFFELSPRUIT	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL
X12B	MPUMALANGA	SEEKOEISPRUIT	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL
X12C	MPUMALANGA	SEEKOEISPRUIT	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL
X12D	MPUMALANGA	SEEKOEISPRUIT	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL
X12E	MPUMALANGA	THEESPRUIT	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL
X12F	MPUMALANGA	THEESPRUIT	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL
X12G	MPUMALANGA	KOMATI	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL
X12H	MPUMALANGA	KOMATI	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL
X12J	MPUMALANGA	MTSOLI	HIGH	B: SMALL RISK ALLOWED	A: UNMODIFIED, NATURAL	A: UNMODIFIED, NATURAL
X12K	MPUMALANGA	KOMATI	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL
X13A	MPUMALANGA	KOMATI	HIGH	B: SMALL RISK ALLOWED	B: LARGELY NATURAL	B: LARGELY NATURAL
X13B	MPUMALANGA	KOMATI	MODERATE	C: MODERATE RISK ALLOWED	B: LARGELY NATURAL	B: LARGELY NATURAL
X13C	MPUMALANGA	MKOMZANE	HIGH	B: SMALL RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL
X13D	MPUMALANGA	KOMATI	HIGH	B: SMALL RISK ALLOWED	B: LARGELY NATURAL	B: LARGELY NATURAL
X13E	MPUMALANGA	KOMATI	HIGH	B: SMALL RISK ALLOWED	B: LARGELY NATURAL	B: LARGELY NATURAL
X13F	MPUMALANGA	KOMATI	HIGH	B: SMALL RISK ALLOWED	B: LARGELY NATURAL	B: LARGELY NATURAL
X13G	MPUMALANGA	KOMATI	MODERATE	C: MODERATE RISK ALLOWED	D: LARGELY MODIFIED	C: MODERATELY MODIFIED
X13H	MPUMALANGA	KOMATI	MODERATE	C: MODERATE RISK ALLOWED	D: LARGELY MODIFIED	C: MODERATELY MODIFIED
X13J	MPUMALANGA	KOMATI	MODERATE	C: MODERATE RISK ALLOWED	D: LARGELY MODIFIED	C: MODERATELY MODIFIED
X13K	MPUMALANGA	KOMATI	MODERATE	C: MODERATE RISK ALLOWED	D: LARGELY MODIFIED	C: MODERATELY MODIFIED
X13L	MPUMALANGA	KOMATI	HIGH	B: SMALL RISK ALLOWED	D: LARGELY MODIFIED	D: LARGELY MODIFIED
X14A	MPUMALANGA	LOMATI	VERY HIGH	A: NO HUMAN HAZARDS	C: MODERATELY MODIFIED	B: LARGELY NATURAL
X14B	MPUMALANGA	LOMATI	VERY HIGH	A: NO HUMAN HAZARDS	B: LARGELY NATURAL	B: LARGELY NATURAL
X14C	MPUMALANGA	POPONJANE	HIGH	B: SMALL RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL
X14D	MPUMALANGA	LOMATI	VERY HIGH	A: NO HUMAN HAZARDS	B: LARGELY NATURAL	B: LARGELY NATURAL
X14E	MPUMALANGA	LOMATI	HIGH	B: SMALL RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL
X14F	MPUMALANGA	mlambanaynthi	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
X14G	MPUMALANGA	LOMATI	HIGH	B: SMALL RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL
X14H	MPUMALANGA	LOMATI	MODERATE	C: MODERATE RISK ALLOWED	D: LARGELY MODIFIED	C: MODERATELY MODIFIED
X21A	MPUMALANGA	CROCODILE	VERY HIGH	A: NO HUMAN HAZARDS	B: LARGELY NATURAL	B: LARGELY NATURAL
X21B	MPUMALANGA	CROCODILE	HIGH	B: SMALL RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
X21C	MPUMALANGA	CROCODILE (Kwena Dam)	HIGH	B: SMALL RISK ALLOWED	E - F: NOT AN ACCEPTABLE	E - F: > E NOT ATTAINABLE IN 5 YR - USE D AS DEFAULT
X21D	MPUMALANGA	CROCODILE	HIGH	B: SMALL RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
X21E	MPUMALANGA	CROCODILE	HIGH	B: SMALL RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED

QUAT.No.	PROVINCE	RIVERS	EISC	DEMC	PESC	BEST AEMC
X21F	MPUMALANGA	ELANDS	MODERATE	C: MODERATE RISK ALLOWED	D: LARGELY MODIFIED	C: MODERATELY MODIFIED
X21G	MPUMALANGA	ELANDS	HIGH	B: SMALL RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL
X21H	MPUMALANGA	NGODWANA	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL
X21J	MPUMALANGA	ELANDS	HIGH	B: SMALL RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL
X21K	MPUMALANGA	ELANDS	HIGH	B: SMALL RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL
X22A	MPUMALANGA	HOUTBOSLOOP	HIGH	B: SMALL RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL
X22B	MPUMALANGA	CROCODILE	HIGH	B: SMALL RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL
X22C	MPUMALANGA	CROCODILE	MODERATE	C: MODERATE RISK ALLOWED	D: LARGELY MODIFIED	C: MODERATELY MODIFIED
X22D	MPUMALANGA	NELS RIVER	LOW	D: LARGE RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL
X22E	MPUMALANGA	SAND	LOW	D: LARGE RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL
X22F	MPUMALANGA	NELS RIVER	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL
X22G	MPUMALANGA	SAND	LOW	D: LARGE RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL
X22H	MPUMALANGA	NELS RIVER	MODERATE	C: MODERATE RISK ALLOWED	D: LARGELY MODIFIED	C: MODERATELY MODIFIED
X22J	MPUMALANGA	CROCODILE	HIGH	B: SMALL RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
X22K	MPUMALANGA	CROCODILE	HIGH	B: SMALL RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
X23A	MPUMALANGA	NOORD KAAP	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
X23B	MPUMALANGA	NOORD KAAP	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
X23C	MPUMALANGA	QUEENS	HIGH	B: SMALL RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
X23D	MPUMALANGA	QUEENS	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
X23E	MPUMALANGA	SUID KAAP	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
X23F	MPUMALANGA	SUID KAAP	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
X23G	MPUMALANGA	KAAP	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
X23H	MPUMALANGA	KAAP	MODERATE	C: MODERATE RISK ALLOWED	D: LARGELY MODIFIED	E - F: > E NOT ATTAINABLE IN 5 YR - USE D AS DEFAULT
X24A	MPUMALANGA	NZIKAZE	LOW	D: LARGE RISK ALLOWED	D: LARGELY MODIFIED	C: MODERATELY MODIFIED
X24B	MPUMALANGA	NZIKAZE	LOW	D: LARGE RISK ALLOWED	D: LARGELY MODIFIED	C: MODERATELY MODIFIED
X24C	MPUMALANGA	NOORD KAAP	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
X24D	MPUMALANGA	CROCODILE	HIGH	B: SMALL RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
X24E	MPUMALANGA	NOORD KAAP	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
X24F	MPUMALANGA	CROCODILE	HIGH	B: SMALL RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
X24G	MPUMALANGA	MYAMITI	LOW	D: LARGE RISK ALLOWED	A: UNMODIFIED, NATURAL	A: UNMODIFIED, NATURAL
X24H	MPUMALANGA	CROCODILE	HIGH	B: SMALL RISK ALLOWED	D: LARGELY MODIFIED	D: LARGELY MODIFIED
X31A	MPUMALANGA	SABIE	HIGH	B: SMALL RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL
X31B	MPUMALANGA	SABIE	HIGH	B: SMALL RISK ALLOWED	B: LARGELY NATURAL	B: LARGELY NATURAL
X31C	MPUMALANGA	MAC MAC	VERY HIGH	A: NO HUMAN HAZARDS	B: LARGELY NATURAL	B: LARGELY NATURAL
X31D	MPUMALANGA	SABIE	HIGH	B: SMALL RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
X31E	MPUMALANGA	MOTITSI	HIGH	B: SMALL RISK ALLOWED	B: LARGELY NATURAL	B: LARGELY NATURAL
X31F	MPUMALANGA	MOTITSI	HIGH	B: SMALL RISK ALLOWED	B: LARGELY NATURAL	B: LARGELY NATURAL
X31G	MPUMALANGA	SABIE	HIGH	B: SMALL RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
X31H	MPUMALANGA	NOORD SAND	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL
X31J	MPUMALANGA	NOORD SAND	MODERATE	C: MODERATE RISK ALLOWED	D: LARGELY MODIFIED	C: MODERATELY MODIFIED
X31K	MPUMALANGA	SABIE	HIGH	B: SMALL RISK ALLOWED	B: LARGELY NATURAL	B: LARGELY NATURAL
X31L	MPUMALANGA	SARINGWA	LOW	D: LARGE RISK ALLOWED	C: MODERATELY MODIFIED	A: UNMODIFIED, NATURAL
X31M	MPUMALANGA	SABIE	VERY HIGH	A: NO HUMAN HAZARDS	B: LARGELY NATURAL	B: LARGELY NATURAL
X32A	MPUMALANGA	GROOT SAND	HIGH	B: SMALL RISK ALLOWED	B: LARGELY NATURAL	B: LARGELY NATURAL
X32B	MPUMALANGA	KLEIN SAND	HIGH	B: SMALL RISK ALLOWED	B: LARGELY NATURAL	B: LARGELY NATURAL
X32C	MPUMALANGA	SAND	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED

QUAT.No.	PROVINCE	RIVERS	EISC	DEMC	PESC	BEST AEMC
X32D	MPUMALANGA	MUTLUMUVI	HIGH	B: SMALL RISK ALLOWED	B: LARGELY NATURAL	B: LARGELY NATURAL
X32E	MPUMALANGA	NWAREHLE	HIGH	B: SMALL RISK ALLOWED	C: MODERATELY MODIFIED	B: LARGELY NATURAL
X32F	MPUMALANGA	MUTLUMUVI	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
X32G	MPUMALANGA	SAND	MODERATE	C: MODERATE RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
X32H	MPUMALANGA	SAND	HIGH	B: SMALL RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
X32J	MPUMALANGA	SAND	HIGH	B: SMALL RISK ALLOWED	C: MODERATELY MODIFIED	C: MODERATELY MODIFIED
X33A	MPUMALANGA	SABIE	HIGH	B: SMALL RISK ALLOWED	B: LARGELY NATURAL	B: LARGELY NATURAL
X33B	MPUMALANGA	SABIE	HIGH	B: SMALL RISK ALLOWED	B: LARGELY NATURAL	B: LARGELY NATURAL
X33C	MPUMALANGA	MLONDOZI	LOW	D: LARGE RISK ALLOWED	A: UNMODIFIED, NATURAL	A: UNMODIFIED, NATURAL
X33D	MPUMALANGA	SABIE	HIGH	B: SMALL RISK ALLOWED	B: LARGELY NATURAL	B: LARGELY NATURAL
X40A	MPUMALANGA	SWENI	LOW	D: LARGE RISK ALLOWED	A: UNMODIFIED, NATURAL	A: UNMODIFIED, NATURAL
X40B	MPUMALANGA	NWANETSI	LOW	D: LARGE RISK ALLOWED	A: UNMODIFIED, NATURAL	A: UNMODIFIED, NATURAL
X40C	MPUMALANGA	NWASITSOTHSO	LOW	D: LARGE RISK ALLOWED	A: UNMODIFIED, NATURAL	A: UNMODIFIED, NATURAL
X40D	MPUMALANGA	NSWASITSONTSO	LOW	D: LARGE RISK ALLOWED	A: UNMODIFIED, NATURAL	A: UNMODIFIED, NATURAL

Fig.56: EISC, PESC & AEMC for X11A - X13L

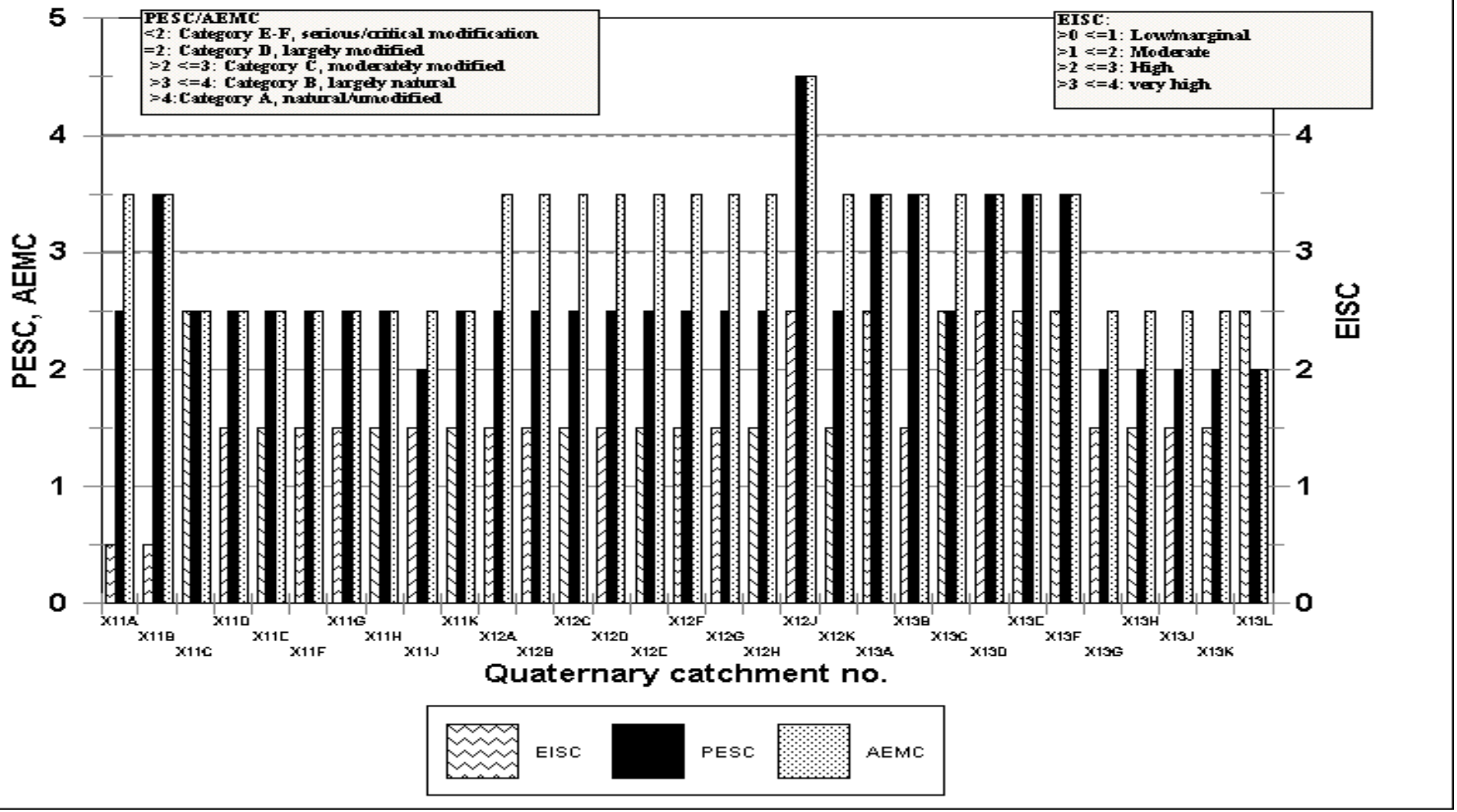
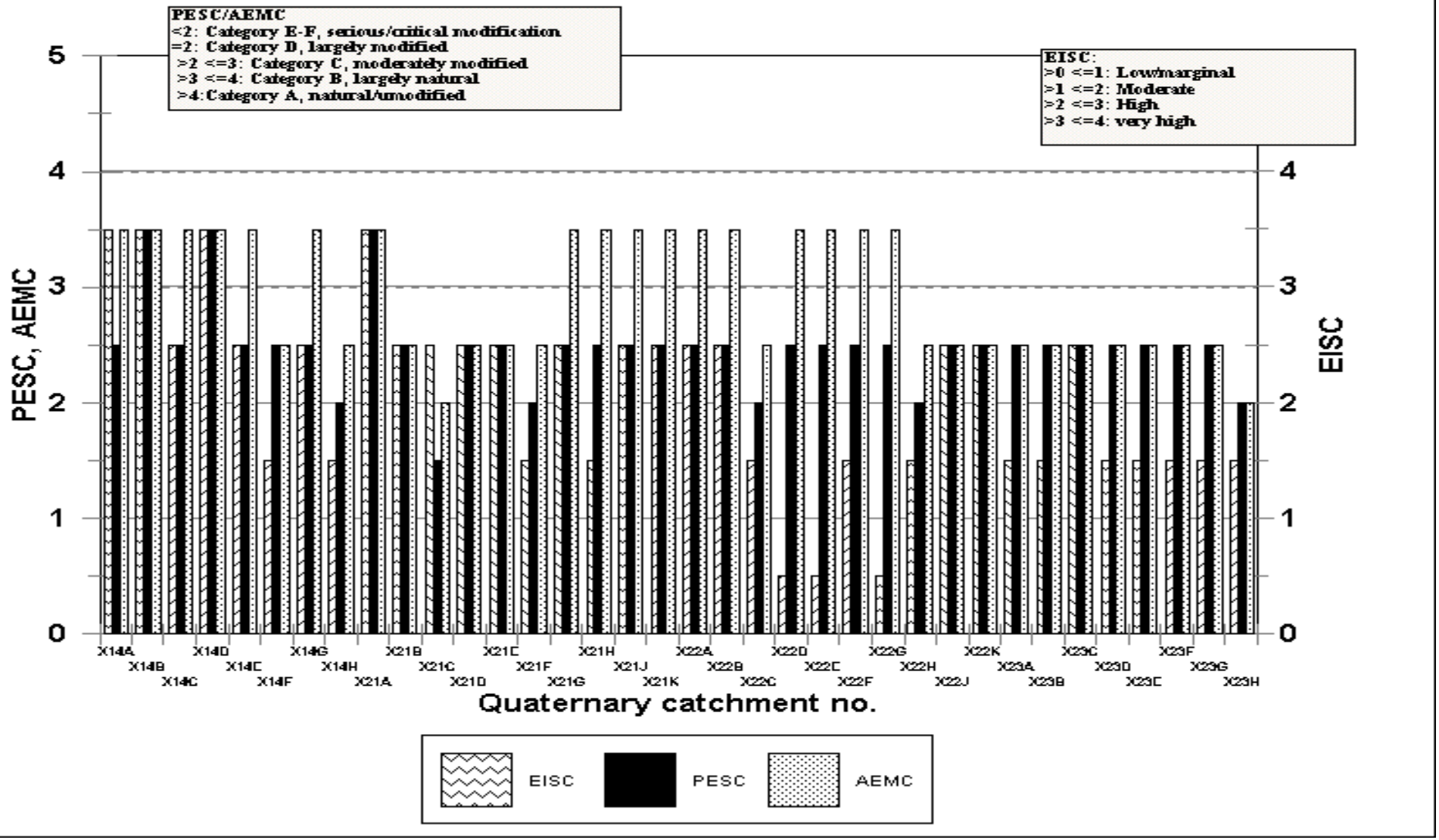


Fig.57: EISC, PESC & AEMC for X14A - X23H



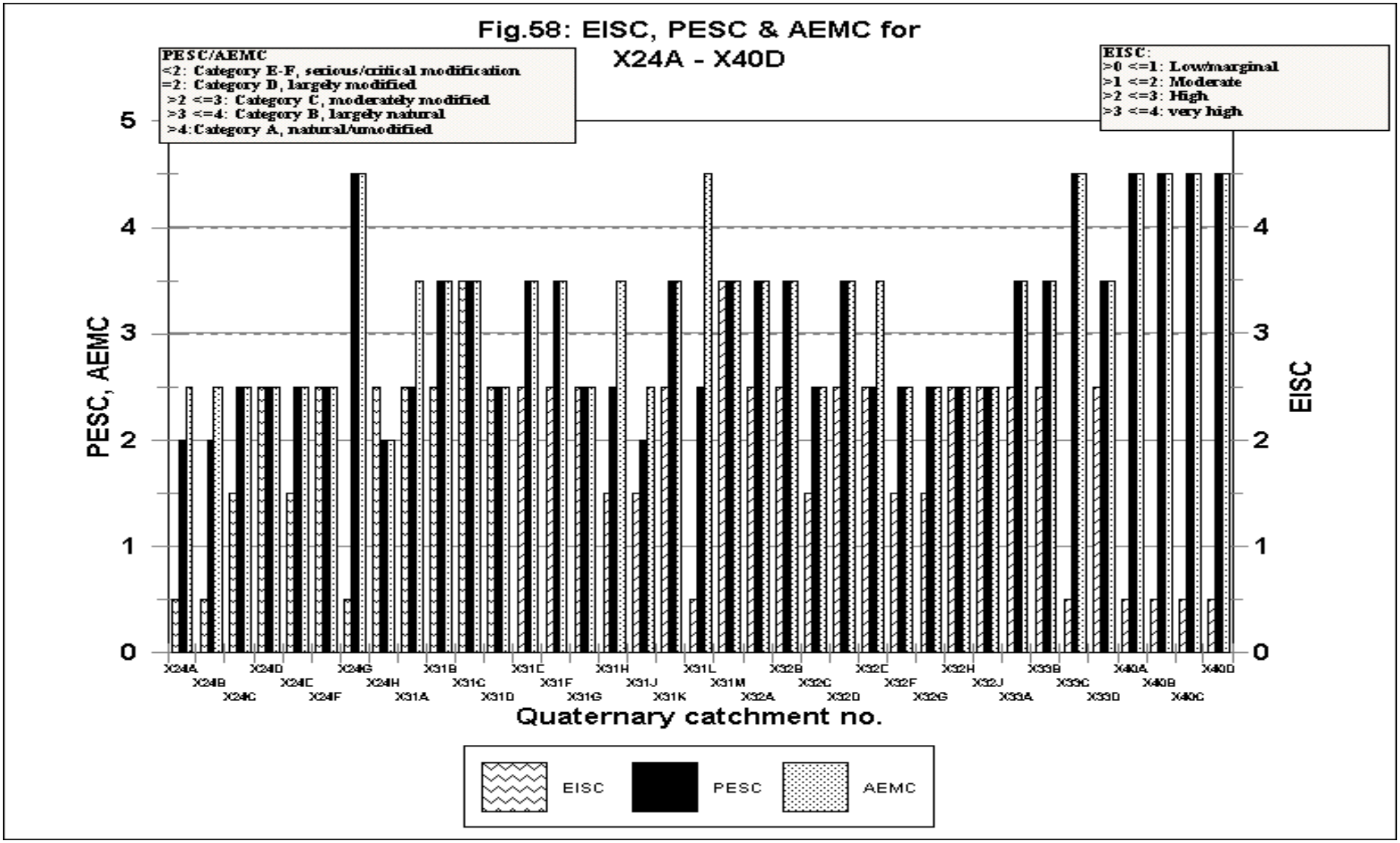


Fig.58: EISC, PESC & AEMC for
X24A - X40D
PESC/AEMC
<2: Category E-F, serious/critical modification
=2: Category D, largely modified
>2 <=3: Category C, moderately modified
>3 <=4: Category B, largely natural
>4:Category A, natural/unmodified
EISC:
>0 <=1: Low/marginal
>1 <=2: Moderate
>2 <=3: High
>3 <=4: very high
PESC, AEMC
EISC
0
1
2
3
4
5
X24A X24B X24C X24D X24E X24F X24G X24H X31A X31B X31C X31D X31E X31F X31G X31H X31J X31K X31L X31M X32A X32B X32C X32D X32E X32F X32G X32H X32J X33A X33B X33C X33D X40A X40B X40C X40D
Quaternary catchment no.
EISC
PESC
AEMC