**T Ltd v Income Tax**

**Division:** High Court of Tanzania at Dar Es Salaam

**Date of judgment:** 20 September 1973

**Case Number:** 11/1971 (47/74)

**Before:** Biron J

**Sourced by:** LawAfrica

*[1] Income Tax – Capital or income payment – Expenditure on preliminary surveys for capital projects – Capital payment. [2] Income Tax – Deduction – Scientific research – Whether intention behind payment relevant – East African Income Tax Management Act* (*Cap.* 24), *s.* 13 (2) (*p*)*. [3] Income Tax – Deduction – Scientific research – Investigation of hydrology of a river is scientific research.*

**Editor’s Summary** The appellant carried out certain surveys connected with proposals for electricity supply projects and these involved the feasibility of the construction of power lines, of thermal generation schemes and of hydro-electric projects. The facts are set out in the judgment. The respondent disallowed all expenditure as being of a capital nature. The appellant appealed, contending that the projects were for the production of income, alternatively that the expenditure was on scientific research.

**Held –** (i) expenditure on preliminary surveys for capital projects is capital expenditure;

( ii) the test of whether expenditure is on scientific research is objective and the intention behind the expenditure is irrelevant;

(iii) the expenditure on transmission lines and thermal generation schemes was not on scientific research; (iv) the study of the hydrology of a river is an activity in the field of natural science and the expenditure is therefore on scientific research. Appeal allowed in part.

**Case referred to Judgment:** 1. *Kenya Meat Commission v. Income Tax*, [1968] E.A. 281.

**JUDGMENT**

**Biron J:** These three appeals brought by the appellant Company, hereinafter referred to as the Company, against the assessments by the Commissioner-General of Income Tax hereinafter referred to as the Commissioner-General, one direct from the assessment by the Commissioner-General and the other two from the decisions of the Local Committee upholding the assessments by the Commissioner-General have with the consent of the parties been consolidated and heard together, as the issues are the same in all three. All three appeals are against the refusal of the Commissioner-General to allow as deductions expenditure incurred in surveys and feasibility studies made in respect of certain projects contemplated by the Company, for the years of income 1964, 1965 and 1969. It is necessary to set out the Company’s Statement of Facts and sufficient to set out the Statement for the year of income 1965 for, as remarked, the facts are the same in each case, the only difference being in the figures for the respective years. “*STATEMENT OF FACTS 1965 COMPANY REQUIRED TO SUPPLY CONSUMERS*: The Company is obliged by the Electricity Ordinance, (Cap. 131) ss. 14 and 16 to supply consumers within its areas of supply. Like provision is also made by Clause 6 (1), of the Company’s Licence granted by Government on 1 March 1957. These provisions bind the Company to meet additional demand for electricity as and when it arises within the licensed zones of supply. *STEPS TAKEN TO MEET ADDITIONAL DEMAND:* T. Ltd. meets the obligations imposed by the licence and the Electricity Ordinance by forecasting expected demand over the years ahead. Comparison of the demand forecast against available plant and/or transmission line capacity indicates the expected date when additional plant and/or transmission lines will require to be in operation; Preliminary studies are carried out from time to time of the hydroelectric potential of various rivers in the country. The Company hopes in time, in co-operation with the Ministry of Water Development and Power, to have available data on the hydro-electric potential of all the rivers in Tanzania. When demand forecasts indicate additional capacity will require to be provided, Engineering Consultants are commissioned to carry out feasibility studies to enable a decision to be taken on the best means of meeting the additional demand. Economic comparisons may be made of: 1. Construction of a transmission line to link two supply systems to meet additional demand in one of them e.g. Coastal System to Moshi/Arusha system. Or2. C onstruction of alternative hydro-schemes and necessary transmission lines. Or3. T hermal generation by steam or diesel engines in the centre which requires additional capacity. *DETAILS STUDIED*: To enable economic comparisons to be made, studies will be necessary of: 1. The pattern of load growth to determine the size and frequency of installation of generating units. 2. The comparative costs of alternative schemes. *HYDRO-ELECTRIC SCHEME*: Costs of a proposed hydro-electric scheme can only be estimated after studies of the: 1. H ydrology of the river on which the proposed scheme is to be established to determine flood peaks, pattern and amount of water flow so that the size of dams and water storage areas may be calculated. 2. G eology of the site and the surrounding area to ensure that no fault in the ground on which the dam is to be built will cause excessive leakage of stored water through the fault thus depriving the turbines of water and reducing the Power Station output, or in the extreme case the fault could result in a catastrophic failure of the dam. 3. T he area of the site by Air Photography and mapping to establish ground contour levels, the line of any tunnels necessary, and the site of the Power Stations. 4. G eophysical aspects of the site to establish the feasibility and difficulties of tunnelling, whether the intended power station site is suitable – e.g. rocks cannot fall into the building when erected, and the general soil conditions to gauge suitability and size of foundations. *TRANSMISSION LINES*: Cost of a proposed transmission line can only be estimated after study of the:

1. Route – to establish the line route so that the most economic line is selected, to establish the type of construction, and to assess compensation for damage and wayleaves.

2. Electrical considerations to establish the load carrying capacity of the line.

3. Lightning conditions to determine whether or not abnormal earthing is necessary.

4. Substations required, to establish transformer sizes and relevant switch-gear required. *THERMAL GENERATION SCHEMES*: Feasibility studies of the thermal generation schemes are less involved than those for hydro-electric schemes, yet for comparison of hydro/thermal projects or steam/diesel alternatives, it is necessary to consider various factors including:

1. A vailability and costs of different types or grades of various and alternative types of prime movers in order to assess running costs. 2. O ptimisation of proximity to load centre, fuel source, cooling water supplies, etc. 3. S uitability of proposed site location considering foundation conditions, amenity factor, etc. *AUTHORIZATION OF EXPENDITURE ON CAPITAL PROJECTS*: No expenditure of a capital nature can be undertaken by T. Ltd. on: 1. A hydro-electric project; 2. O n a project for thermal generation; 3. O n the installation of transmission lines; unless: i) There is available a source or sources of finance on appropriate terms; ii) The Board of Directors of T. Ltd has after considering all the available date decided formally to approve such expenditure. *YEAR OF INCOME – 1965*: The expenditure of the sum of £49,561 referred to in the Memorandum of Appeal was incurred in respect of studies relating to the following projects: Hale/Moshi Transmission Line Shs. 2,222/17 Mandera Hydro-electric Scheme ” 693,138/91 Greater Pangani Hydro-electric Scheme “ 182,290/80 Pangani Falls Cascade Scheme “ 113,567/17 “ 991,219/05 £49,561/- The Board of Directors of T. Ltd. has never formally or otherwise approved any of the said projects all of which have now been abandoned.” Likewise it is sufficient to set out the Commissioner General’s Statement of Facts for the same year of income: “*RESPONDENT’S STATEMENT OF FACTS* . . . . . . . . . . . . . . . . 2. T he Respondent will contend that the Appellants are not entitled to a deduction in the sum of Shs. 991,220/- or at all for the year of Income 1965 as the said sum represents capital expenditure and therefore prohibited deduction under ss. 14 (1) and 15 (1) of the East African Income Tax Management Act, 1958. 3. T he Respondent will contend that the expenditure was capital expenditure, incurred for purposes other than Scientific Research purposes and as such the Respondent properly disallowed the Appellant’s claim for deductions. 4. T he Respondent will contend that the expenditure does not qualify for deduction or at all under the provisions of the Second Schedule to the East African Income Tax (Management) Act, 1958. . . . . . . . . . . . . . . . WHEREFORE the Respondent will pray that the appeal herein be dismissed with costs and Assessment No. 21/18210 for the year of Income 1965 be confirmed.” For the same reasons it is also sufficient to set out the Memorandum of Appeal for the same year: “*MEMORANDUM OF APPEAL* Being aggrieved and dissatisfied by Assessment No. 21/18210 and the decision of the Local Committee of Dar es Salaam given on the first day of October 1970, dismissing the appellant’s appeal relating to the said assessment, in respect of the year of income 1965, the appellant hereby appeals to this Honourable Court against the said assessment on the following grounds: 1. T hat the said assessment is wrong in law and in fact in that the sum of £49,561 (Shs. 991,220/-) ought to have been allowed as a deduction in computing the appellant’s gains and profits. 2. T hat the said sum having been spent by the appellant during the said year in surveys to ascertain whether or not certain capital expenditure in the development of the appellant’s undertaking should be incurred thereafter, ought to have been deducted as: i) expenditure of a revenue nature wholly and exclusively incurred by the appellant in the production of the appellant’s income; ii) alternatively as expenditure of a capital nature incurred by the appellant on scientific research. The appellant therefore prays: i) that the assessment be varied or amended by deducting the sum of £49,561 (Shs. 991,220/-) from the taxable income of the appellant in the said year; ii) for such further or other relief as this Honourable Court may think just and reasonable; iii) for the cost of this appeal.” In the first ground of appeal the issue is whether the expenditure incurred was what in popular parlance is termed, revenue expenditure or capital expenditure, the Company’s contention being that the expenditure was revenue expenditure and therefore deductible under s. 13 (1) of the East African Income Tax Management Act 1958 (hereinafter referred to as the Act) which was the Act in force at the relevant time, though I am following counsel in referring to the relevant sections as numbered in the revised version of the Act, the relevant sections being 13 and 14, which in the old Act where respectively sections 14 and 15. Although counsel have cited a considerable number of authorities, I hope I will be forgiven for not referring to a single one on this issue, as each case has to be decided on its own particular facts, and therefore can be distinguished from other cases, and further I am satisfied that this particular case can be decided on its facts related to the relevant provisions in the Act, by simply applying the cardinal canon of construction, that the words of a statute should be given their plain and ordinary meaning. The provisions in the Act governing this case are sections 13 (1) and 14 (1). The relevant part of s. 13 (1) reads: “13. (1) For the purpose of ascertaining the total income of any person for any year of income there shall be deducted all expenditure incurred in such year of income which is expenditure wholly and exclusively incurred by him in the production of such income and which is not expenditure in respect of which no deduction shall be allowed under section 14;” And the relevant part of s. 14 referred to in the subsection set out and on which the Commissioner-General relies, reads: “14. (1) Subject to subsections (2), (3), (4) and (5) of section 13, for the purposes of ascertaining the total income of any person for any year of income, no deduction shall be allowed in respect of: (*a*) . . . . . . . . (*b*) any capital expenditure, or any loss, diminution or exhaustion of capital.” As remarked, this first issue is simply whether the expenditure incurred is revenue expenditure or capital expenditure. Initially, the Company is handicapped if not estopped, by its own Statement of Facts, the ante-penultimate paragraph of which reads: “*AUTHORIZATION OF EXPENDITURE ON CAPITAL PROJECTS*: No expenditure of a capital nature can be undertaken by T. Ltd. On: 1. A Hydro-electric project; 2. O n a project for thermal generation; 3. O n the installation of transmission lines; unless i) There is available a source or sources of finance on appropriate terms. ii) The Board of Directors of T. Ltd. has after considering all the available data decided formally to approve such expenditure.” Further, the Company states in its Memorandum of Appeal at paragraph 2: “2. That the said sum having been spent by the appellant during the year in surveys to ascertain whether or not certain capital expenditure in the development of the appellant’s undertaking should be incurred thereafter, ought to have been deducted as: i) expenditure of a revenue nature wholly and exclusively incurred by the appellant in the production of the appellant’s income; ii) alternatively as expenditure of a capital nature incurred by the appellant on scientific research.” Thus the Company itself expressly states that the costs of the projects would if they had not been abandoned have been capital expenditure. Further still, Mr. Robinson who described himself as presently the manager (Construction Division) of the Company and at the material times as the deputy generating engineer, who gave evidence for the Company, stated and I quote: “These surveys become necessary when it is clear that generation, transmission and distribution *must be added to the Company’s assets* in order to meet the demand in future years.” (The italics are naturally mine). From a purely commonsense point of view I fail to comprehend how the costs of these preliminary surveys could possibly have been divorced and separated from the costs of the projects if they had been executed. It therefore follows, to my mind, that just as the costs of these feasibility studies would have been included in the overall costs of the projects if they had been proceeded with the executed, the fact that the projects were abandoned cannot ipso facto effect a division and differentiation in treatment between the costs of these preliminary surveys and the costs of the projects if executed, so that the former comes under income expenditure because the projects were abandoned. The fact that Mr. Bissland, the Company’s manager of finance, testified that the costs of these surveys are shown in the Company’s accounts under the heading of expenses account cannot in any way affect the position. Likewise the fact that, as stated in the Statement of Facts, no expenditure of a capital nature can be undertaken by the Company unless *inter alia*, the Board of Directors has approved such expenditure and the expenditure incurred on the surveys was never formally or otherwise approved, would not affect the nature of the expenditure in law. The mere fact that the projects were not proceeded with because, so Mr. Robinson stated in his evidence, the government could not guarantee an adequate flow of water from the Pangani river as there are other riparian rights, and also because it was considered that the output as indicated by the reports would be inadequate for the demand in future years, does not make the expenditure on these preliminary surveys any the less expenditure on the contemplated projects and so capital expenditure. If any assistance were necessary to what I consider this commonsense ruling on the nature of these expenses on the preliminary surveys, it can be found in r. 60 of the Electricity Rules made under s. 83 of the Electricity Ordinance (Cap. 131) which in the Second Schedule prescribes the form the Annual Statements of Accounts are to be shown. No. III headed Capital Account gives as the first item, “1. To preliminary expenses (to be specified)”. In my judgment and I have no hesitation in so finding, the costs incurred in these surveys made by the consultant firms of Messrs. Balfour, Beatty & Co. Limited and Sir William Halcrow and Partners, Consulting Engineers, are but preliminary expenses for the contemplated projects, which although they were not proceeded with but abandoned, nonetheless constitute capital expenditure. The first ground of appeal therefore fails. The second ground is based on a contention in the alternative, that the expenditure even if capital expenditure, was nevertheless deductible under the provisions of s. 13 (2)(*p*)(1) of the Act, as being expenditure of a capital nature on scientific research. Subsection (2) paragraph (*p*) reads: “(2) Without prejudice to the operation of sub-s. (1), in computing the gains or profits for any year of income chargeable to tax under s. 3 (*a*), the following amounts shall be deducted– . . . . . . . ( *p*) a ny expenditure incurred by any person for the purposes of a trade carried on by him, being– (i) e xpenditure of a capital nature on scientific research; or ( ii) e xpenditure not of a capital nature, on scientific research; or (iii) a sum paid to any scientific research association approved for the purposes of this paragraph by the Commissioner-General being an association which has as its object the undertaking of scientific research related to the class of trade to which such trade belongs; or (iv) a sum paid to any university, college, research institute or other similar institution approved for the purposes of this paragraph by the Commissioner-General for such scientific research as is mentioned in subparagraph (iii) of this paragraph;” It is contended by the Company that the expenditure, the subject matter of these appeals, was on scientific research within the meaning of sub-s. (2), para. (*p*). Mr. Kinariwalla for the Company, called in aid the case of *Kenya Meat Commission v. Income Tax*, [1968] E.A. 281. The headnote to that case which fully sets out the facts reads: “The Kenya Meat Commission made a donation of K. Shs. 200,000/- to the Kenya National Fund on condition that the money was used by the Director of Veterinary Services ‘in research and other work which will be of benefit to the Kenya beef and mutton industry’. The Commission, which had a statutory monopoly of the beef and mutton trade in Kenya, took care to ensure that the money was to be expended only on specific projects which would benefit that trade (and not, for example, the dairy industry). The Commissioner of Income Tax refused to allow this donation as a deductible expense, and his refusal was upheld (on appeal from the local committee) by the High Court of Kenya. The Commission then brought this further appeal, arguing that the donation was expenditure of a capital nature incurred on scientific research and therefore deductible under s. 14 (2) (*p*) of the East African Income Tax (Management) Act 1958. The Commissioner of Income Tax, on the other hand, argued (*inter alia*) that the donation was not deductible under that provision because it was not expenditure incurred ‘for the purpose of a trade carried on’ by the Commission. HELD. (i) Sub-s. 14(1) and sub-s. 14 (2) of the East African Income Tax (Management) Act 1958 must be read independently; and the classes of expenditure set out in sub-s. 14 (2) are exceptions to the general rules set out in sub-s. 15 (1) of that Act; ( ii) the donation was expenditure incurred ‘by’ the Commission ‘wholly and exclusively’ for the production of income; and was made ‘for the purposes of trade carried on’ by the Commission within s. 14(2) (*p*) of the Act; (iii) therefore the donation was a deductible expense under s. 14 (2) (*p*) of the Act. Appeal allowed.” This case certainly supports Mr. Kinariwalla’s submission that subsections (1) and (2) of s. 13 (in the revised version which we are following) are to be read independently of each other, also that the expenditure incurred in these cases was for the production of income and for the purposes of the Company’s trade. But it does not support the Company’s case that, nor is it of any assistance to the Court in determining whether, this expenditure constitutes expenditure on scientific research within the meaning of sub-para. (*p*) of sub-s. (2) of s. 13 of the Act. In the Kenya case the expenditure the subject matter of the appeal, was money given to the Kenya National Fund on the express condition that it was to be used by the Director of Veterinary Services ‘in research and other work which will be of benefit to the Kenya Beef and Mutton Industry’. In our case the expenditure, the subject matter of these appeals, was on feasibility studies in respect of certain specific projects under contemplation. And the question to be determined is whether such expenditure can be held to constitute expenditure on scientific research within the meaning of sub-para. (*p*) of sub-s. (2) of s. 13. It must be conceded at once that I find the question extremely difficult to resolve. No assistance can be derived from the corresponding provisions in the English Act which vary very little from those in the Act we are construing. Nor have I been able to find a single authority to the point. Unlike the issue on the first ground of appeal where I experienced little difficulty in relating the facts to the relevant provisions and finding that the expenditure could not be other than capital expenditure without calling in aid any authority, on this instant issue, I would more than welcome some guidance in construing the relevant provisions. However, not having found any, I am driven to construe as best as I can the provisions of the Act in relation to the facts, relying solely on my own interpretation. Scientific research is defined in the Act itself in s. 13 (6) as: “13. (6) For the purposes of subsection (2) (*p*) of this section: (*a*) ‘Scientific research’ means any activities in the fields of natural or applied science for the extension of human knowledge.” Mr. Bishota for the Commissioner General submitted that for expenditure to constitute expenditure on scientific research within the meaning of subpara. (*p*) (i) it must be similar to the expenditures set out in sub-paras. (iii) and (iv) that is, it must correspond to grants made to scientific research associations or institutions of a similar nature for the express purpose of research, as indeed was the position in the *Kenya Meat Commission* case. With respect, I do not agree with this submission by Mr. Bishota, for the paragraph sets out several and independent types of expenditure and they need not necessarily be of the same nature nor need they be construed ejusdem generis. The fact that the expenditure was not expressly made available for scientific research or indeed any abstract or recondite research need not, to my mind, be fatal, if in fact it was incurred on what could be comprehended “scientific research” within the meaning of the section. Although in each of the three consolidated cases the expenses are lumped together, in order to determine whether they, or any of the individual expenses, could be held to constitute expenditure on scientific research, they must be considered separately and individually. The expenses as set out in the several Statements of Facts are as follows: *Year of Income 1964:* Greater Pangani Hydro-Electric Project (50%) Shs. 182,290/80 Moshi 2A, Hydro-Electric Project ” 53,612/92 Hale/Moshi Transmission Line ” 5,456/67 ” 241,360/39 *Year of Income 1965:* Hale/Moshi Transmission Line Shs. 2,222/17 Mandera Hydro-electric Scheme ” 693,138/91 Greater Pangani Hydro-electric Scheme ” 182,290/80 Pangani Falls Cascade Scheme ” 113,567/17 ” 991,219/05 *Year of Income 1969:* Additions to Hale and Ilala Substations Shs. 63,446/- Proposed Thermal Power Station Investigation ” 23,171/- Mandera ” 4,098/- Kurasini “B” Survey and site clearance ” 15,444/- Kurasini “B” 33KV Interconnections ” 11,311/- Shs. 117,470/- I now propose to examine closely and construe the wording of para. (*p*). It starts off with: “Any expenditure incurred by any person for the purposes of a trade carried on by him, . . .” Pausing there, it is not and cannot be disputed that the expenditure was for the purposes of the trade carried on by the Company. In fact the Company is compelled both by its licence and the Electricity Ordinance above referred to, to meet the ever increasing demand for power. Clause 6 (1) of the Company licence reads: “6.(1) The licensees shall supply electrical energy to any person within any area of supply who may require such supply on the same terms and conditions as those to which any other person in the same zone of any area of supply is entitled in similar circumstances to a corresponding supply thereof.” And by ss. 14 and 16 (1) and (2) of the Electricity Ordinance: “14. Where energy is supplied by a licensee, every person within the area of supply shall, except in so far as is otherwise provided by the terms and conditions of the licence, be entitled to a supply on the same terms as those on which any other person in the same area is entitled in similar circumstances to a corresponding supply. 16. ( 1) I n any compulsory zone the licensee shall make available a general supply of electrical energy to all ordinary consumers requiring such supply and shall install and maintain such mains and distributing mains, including transformers, as are necessary, in the opinion of the Minister for Water Development and Power, to provide such supply and no charge shall be made to owners or occupiers of premises in any such zone supplied under that supply in respect of mains and distributing mains, including transformers, and further the licensee shall install any service line which may be necessary for the purpose of supplying the maximum power with which any such owner or occupier is entitled to be supplied under the licence: Provided that the cost or, in any case where a scale of charges for such purpose has been submitted by the licensee and approved by the Minister for Water Development and Power, an amount calculated according to such scale to represent the cost, of so much of any electric supply-lines for the supply of electrical energy to any owner or occupier as may be laid or erected upon the property of that owner or in the possession of that occupier, and of so much of any such electric supply lines as it may be necessary to lay or erect for a greater distance than 60 feet from any distributing main of the licensee, although not on that property, for the purpose of such supply, shall, if the licensee so requires, be refunded by that owner or occupier.

( 2) I n a development zone the licensee shall make available a supply of electrical energy to all ordinary consumers requiring such supply and shall install and maintain such mains and distributing mains, including transformers, as are necessary in the opinion of the Minister for Water Development and Power, to give such supply and make no charge therefore to any such consumer. The conditions for the supply of electricity to the aforesaid consumers shall be as laid down under subsection (1) of this section and in addition the licensee may require a guarantee, which may include a deposit or other security, from any consumer that such consumer will, for a period not exceeding seven years, receive and pay for the supply of energy at such a rate that the annual payment to be made under such guarantee shall be an annual sum, to be specified in the guarantee, which shall not exceed twenty per centum of the actual capital cost to the licensee of providing and erecting or laying down the required additional electric supply lines incurred in providing such supply: Provided that where a supply is given in whole or in part from lines which are already subject to a similar guarantee from another consumer, and such guarantee is still in force, the licensee shall apportion the remaining annual sums guaranteed under the first guarantee between the first and such subsequent consumers and the licensee shall require each such subsequent consumers to enter a guarantee accordingly. Any dispute between any consumers or between the licensee and any consumer under this provision shall be referred for the decision of an electric inspector, or of such other person as the Minister may in any special case appoint, who shall adjudicate upon such dispute and the decision of such electric inspector or such other person as aforesaid thereon shall be final and binding between the parties: Provided further that in calculating such annual sum as aforesaid any other item of outlay (including the costs of additional works for generation or transmission) involved in providing the supply required by any consumer may also be taken into account if and so far as the Minister may approve according to the circumstances of each case: And provided further that the consumer may by agreement with the licensee make a capital payment in satisfaction or reduction of any guarantee.” It is not disputed that the areas for which the various projects were intended are compulsory zones within the meaning of the licence or their equivalent in the Ordinance, development zones. The paragraph then goes on to say at sub-para. (i) “expenditure of a capital nature on scientific research”. The change in the wording is to my mind not only relevant but very material, for the paragraph commences with “any expenditure incurred by any person for the *purposes* of a trade carried on by him”, and of the expenditure itself it says “expenditure of a capital nature on scientific research” not *for the purposes of* scientific research. Therefore, to my mind, the test is objective, in other words, whether or not the expenditure was expressly intended for the purposes of scientific research is not a determining factor; the criterion is objective, that is, whether in fact the expenditure was on scientific research. In my judgment the expenditure on the feasibility studies for the construction of transmission lines, and likewise the expenditure on the feasibility studies for thermal generating schemes, cannot by any stretch come within the ambit of expenditure on scientific research. I therefore have no hesitation in finding that these expenses are not deductible as capital expenditure incurred on scientific research. The expenses on the feasibility studies on the hydro-electric schemes in my view fall into an entirely different category. In this connection I refer to the Statement of Facts wherein is set out what the preliminary studies entailed. [After noting the paragraph from the statement of facts headed “*HYDRO-ELECTRIC SCHEME*”: the judge continued.] In the definition of scientific research at s. 13 (6) it is stated at sub-para. (*a*) “ ‘scientific research’ means any activities in the fields of natural or applied science for the extension of human knowledge”. It will not, I think, be disputed that the study of the hydrology of a river or the geology and geophysical aspects of the riverside are activities in the fields of natural science. And I do not think it is necessary to call in aid any dictionary definitions, for as remarked above, I am construing the words of the Act in their plain and ordinary meaning. It is also pertinent to note that these feasibility surveys and studies produced several reports; amongst them being a report by Sir William Halcrow and Partners on “The Hydrology of the Pangani River Basin and the Statutory Entitlement to flow at Hale” and a report by Messrs. Balfour, Beatty & Co. on “Future Hydro-Electric Developments on the Pangani River”. To my mind, the researchers and studies of the potentialities of the Mandera and Pagani Rivers with a view to the production of electric power from them, cannot be regarded as other than activities in the fields of natural science. The next requirement for such activities to constitute scientific research is that such activities be “for the extension of human knowledge”. It cannot in my view, be gainsaid that research into the potentialities of rivers for the supply of electric power, particularly in the context of the present world energy crisis, are for the extension of human knowledge, within the meaning of the definition of “scientific research” above set out. In this respect it is pertinent to recall that Mr. Robinson stated in his evidence, that one of the reasons the schemes were not proceeded with, was that the output from the rivers was considered insufficient for the requirements in future years and that, to quote him verbatim, “the projects were dropped in favour of a larger development on the Great Ruaha River”, which naturally would be preceded by feasibility studies, as were made in this, or rather, these cases. It is also I think, not irrelevant to refer to another item in Mr. Robinson’s evidence in connection with the question whether these feasibility studies resulted in the extension of human knowledge, in that he stated that although the studies were undertaken at the instance and for the purposes of the Company’s operations, they could also be of value to other interests, such as agricultural interests. I therefore find as a fact that the expenses incurred on the feasibility surveys and studies for the hydro-electric projects are deductible as expenditure of a capital nature on scientific research within the meaning of s. 13 (2) (*p*) (i). In the result, the appeals are allowed to the extent that the assessment for the year of income 1964 is varied so that the expenses incurred on the research and feasibility studies for the Greater Pangani Hydro-Electric Project are allowed as deductible expenditure, the assessment for the year of income 1965 is varied to the extent that the expenditure on the research and feasibility studies for the Mandera Hydro-Electric Scheme, the Greater Pangani Hydro-Electric Scheme and the Pangani Falls Cascade Scheme, are allowed as deductible expenditure. And the appeal against the assessment for the year of 1969 is dismissed in its entirety. *Order accordingly*.

For the appellant: *AG Kinariwalla* (instructed by the *Tanzania Legal Corporation*)

For the respondent: *DMK Bishota* (Principal Assistant Counsel to the Community)